THE EIGHTH

# ANNUAL REPORT

ON THE

# Health of the County Borough of Wigan,

FOR THE YEAR ENDING DECEMBER 31st, 1903,

BY


## WILLIAM BERRY,

F.R.C.S.I., D.P.H., F. P. & S., Glasgow,

Fellow of the Incorporated Society of Medical Officers of Health.

Fellow of the Sanitary Institute.

Fellow of the Royal Institute of Public Health, and

Fellow of the Royal Academy of Medicine, Ireland.

Medical Officer of Health, and

Medical Superintendent of the Borough Sanatorium for Infectious Diseases.



WIGAN:

THOS. WALL AND SONS LIMITED, PRINTERS, "OBSERVER" OFFICE.

1904.




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## ERRATUM.

Page 13.—Total deaths from Diarrhœa, 104, should read: Total deaths from Diarrhœa, 78.

Page 21.—Year 1902, should read: Year 1903.

Page 71.—Deaths 1903, September (3), Aspull, should read: Removed to Sanatorium September (3), Aspull.

Page 71.—Deaths 1903, October (5), Aspull, should read: Removed to Sanatorium October (5), Aspull.

Page 71.—Deaths 1903, December (1), Aspull, should read: Removed to Sanatorium December (1), Aspull.

Page 76.—Admitted 1903 (310), should read: Admitted 1903 (319).

Page 76.—Discharged 1903 (319), should read: Discharged 1903 (310).

MAY 1904

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# TABLE OF CONTENTS.


| | Pages. |
|---|---|
| Sanitary and Sewerage Committee ... ... ... ... | 5 |
| Sanatorium Sub-Committee ... ... ... ... ... | 6 |
| Insanitary Houses Committee ... ... ... ... ... | 6 |
| Medical Officer of Health's Department... ... ... ... | 7 |
| Local Government Regulation ... ... ... ... ... | 8 |


## PART I.

## VITAL STATISTICS.


| | |
|---|---|
| Statistical Summary for 1903 ... ... ... ... ... | 13 |
| Acreage, Population, Births, and Mortality Rates ... ... | 13 |
| Vital Statistics for England and Wales for 1903 ... ... | 14 |
| Table I.—Weekly Return of Births and Deaths for 1903 ... | 15 |
| Table II.—Monthly Table of Deaths from all causes and Zymotic Diseases, with Rates per 1,000 per annum ... | 16 |
| Table III.—Table showing Comparative Statistics between Wigan and other Towns during 1903 ... ... | 16 |
| Table IV.—Death Rate for Wigan during the last ten years... | 17 |
| Wigan Census 1901 ... ... ... ... ... | 18 |
| County Borough of Wigan, No. of Inhabited Houses,&c. | 18 |
| Local Government Board Returns :— | |
| Table I.—Vital Statistics of whole District during 1903 and previous years ... ... ... ... ... | 19 |
| Table II.—Vital Statistics of separate localities in 1903 and previous years ... ... ... ... ... | 20 |
| Table III.—Cases of Infectious Diseases notified during the year 1903 ... ... .. ... ... ... | 21 |
| Table IV.—Causes of, and Ages at, Death during the year 1903 | 22 |


## PART II.


| | |
|---|---|
| Causes of Death—The Zymotic Diseases ... ... ... | 29 |
| Table of Zymotic Diseases ... ... ... ... ... | 29 |
| Death Rates 1903 ... ... ... ... ... ... ... | 30 |
| No. of Notifications compared with other years... ... ... | 30 |
| Analysis of Notifications ... ... ... ... ... ... | 30 |
| Smallpox ... ... ... ... ... ... ... ... | 31 |
| Small-pox Outbreak ... ... ... ... .. ... | 31 |
| Vaccination Returns, 1902—1903 ... ... ... ... | 40 |
| Vaccination and Small-pox in Northampton ... ... ... | 40 |
| Extracts in relation to Small-pox... ... ... ... ... | 40 |
| Chicken-pox ... ... ... ... ... ... ... | 64 |
| Particulars of Chicken-pox cases ... ... ... ... ... | 64 |
| Scarlet Fever ... ... ... ... ... ... ... | 66 |
| Measles ... ... ... ... ... ... ... ... | 69 |
| Death Returns, Chart I. ... ... ... ... opposite | 70 |
| Whooping Cough ... ... ... ... ... ... ... | 70 |

CONTENTS (PART II.) Continued.


| | Pages. |
|---|---|
| Enteric Fever ... ... ... ... ... ... ... | 70 |
| Diarrhœa ... ... ... ... ... ... ... ... | 72 |
| Diphtheria ... ... ... ... ... ... ... ... | 73 |
| Erysipelas ... ... ... ... ... ... ... ... | 73 |
| Death Returns, Chart II.... ... ... ... opposite | 73 |
| Puerperal Fever ... ... ... ... ... ... ... | 75 |
| Sanatorium... ... ... ... ... ... ... ... | 75 |
| Constitutional Diseases : | |
| Tubercular Diseases ... ... ... ... ... | 79 |
| Rheumatism ... ... ... ... ... ... | 80 |
| Local Diseases : | |
| Respiratory Diseases ... ... ... ... ... | 80 |
| Inquests and Uncertified Deaths... ... ... ... | 80 |


## PART III.


| | |
|---|---|
| Bakehouses... ... ... ... ... ... ... ... | 83 |
| Factory and Workshops Act, 1905 and 1901, and Shop Hours Act, 1892 and 1899 : | |
| Shop Hours Act, 1892-1899 ... ... ... ... | 86 |
| Factory and Workshops Act, 1895-1901... ... ... | 87 |
| Meat Inspection and Slaughter Houses ... ... ... ... | 88 |
| Black Smoke Nuisance ... ... ... ... ... ... | 89 |
| Property Unfit for Human Habitation ... ... ... ... | 89 |
| Unpaved Yards and Passages ... ... ... ... ... | 90 |
| Water Supply—Rainfall ... ... ... ... ... ... | 92 |
| Dairies, Cowsheds, and Milkshops Order, 1885 and 1886 ... | 92 |
| Report of Inspector ... ... ... ... ... ... | 93 |
| Borough Surveyor's Department... ... ... ... ... | 95 |
| Appendix I. ... ... ... ... ... ... ... | 96 |
| Appendix II. ... ... ... ... ... ... ... | 103 |

# SANITARY & SEWERAGE COMMITTEE.

From November, 1903, to November, 1904.

CHAIRMAN :

ALDERMAN J. PHILLIPS, J.P.

VICE-CHAIRMAN :

COUNCILLOR FERD. REES, M.D.

COMMITTEE :

HIS WORSHIP THE MAYOR (ALD. C. B. HOLMES, J.P.)

THE EX-MAYOR (COUNCILLOR RD. JOHNSON, J.P).

ALDERMAN J. T. GEE, J.P.

ALDERMAN LEVI BOOTH, J.P.

COUNCILLOR THOMAS ASHTON, J.P.

„ RICHARD BANNISTER.

„ MATTHEW BENSON, M.D.

„ WILLIAM WILSON.

„ WILLIAM LOWE.

„ A. E. MATHER.

„ WILLIAM LEYLAND.

„ JAMES O'DONAHUE.

„ JAMES WILSON.

---

The Committee meet on the Third Thursday in each month, at 2 30 p.m., in the Committee Room.

# SANATORIUM SUB-COMMITTEE.

CHAIRMAN :

ALDERMAN J. T. GEE, J.P.

COUNCILLOR FERD. REES, M.D.

„ RICHARD BANNISTER.

„ A. ERNEST MATHER.

The Committee meet the Third Wednesday in each month, at 11 a.m. at the Hospital.

---

# INSANITARY HOUSES COMMITTEE.

CHAIRMAN :

COUNCILLOR JOHN PRESCOTT.

VICE-CHAIRMAN : COUNCILLOR THOMAS CLARKE.

THE MAYOR.

THE EX-MAYOR.

ALDERMAN J. T. GEE, J.P.

COUNCILLOR M. BENSON, M.D.

„ GEO. H. BROWN.

„ A. S. HILTON.

„ THOMAS LATHAM.

„ WILLIAM LEYLAND.

„ ARTHUR E. MATHER.

„ JAMES O'DONAHUE.

„ FERD. REES, M.D.

„ FRANK TAYLOR.

„ WILLIAM WILSON.

# MEDICAL OFFICER OF HEALTH'S DEPARTMENT.

Medical Officer of Health and Medical Superintendent of Sanatorium :

WILLIAM BERRY, F.R.C.S.I., D.P.H., F.P.S., Glasgow,

Fellow of the Incorporated Society of Medical Officers of Health,

Fellow of the Sanitary Institute,

Fellow Royal Inst. Public Health, and

Fellow of the Royal Academy of Medicine, Ireland.

Chief Sanitary Inspector :

JOHN SUMNER, Certif. San. Inst. and Assoc. San. Inst.

Assistant Sanitary Inspectors :

CHARLES H. FRANCE, Certif. San. and Assoc. San. Inst.

FRED. MARTLEW, Certif. San. Inst.

M. CLUNAN, Certif. San. Inst.

Smoke, Shop Hours Act, and Factory and Workshops Acts :

FRED. G. BISHOP.

Clerk :

JOHN ASHTON.

Disinfector :

MARCUS JEPHSON.

Master of Sanatorium :

MICHAEL MOORE.

By order of the Local Government Board, dated March 23rd, 1891, Article 18, Section 14, it is prescribed that the Medical Officer of Health shall "prepare an Annual Report, to be made to the "end of December in each year, comprising a summary of the "action taken during the year for preventing the spread of disease, "and an account of the sanitary state of his district generally at "the end of the year. The report shall also contain an account "of the enquiries which he has made as to conditions injurious "to health existing in his district, and of the proceedings in which "he has taken part or advised under the Public Health Act, 1875, "so far as such proceedings relate to those conditions; and also "an account of the supervision exercised by him or on his advice, "for sanitary purposes over places and houses that the Sanitary "Authorities have power to regulate, with the nature and results "of any proceedings which may have been so required and taken "in respect of the same during the year. It shall also record the "action taken by him or on his advice, during the year, in regard "to offensive trades, and to factories and workshops. The report "shall also contain tabular statements (on forms to be supplied "by the Local Government Board, or to the like effect) of the "sickness and mortality within the district, classified according to "diseases, ages, and localities."

CORPORATION OF WIGAN.

OFFICER OF HEALTH'S DEPARTMENT,

FEBRUARY 18TH, 1904.

*To the Chairman and Members of the Sanitary Committee.*

GENTLEMEN,

I have the honour to present you with my Eighth Annual Report on the health of your County Borough for the year 1903.

I regret that the death-rate is greater than in the previous year, being 21·69 per 1,000 of the population, against 20·25 in 1902; it is, however, below the rate for 1901. The excess is due chiefly to an increased number of deaths from Measles, Bronchial, and Pulmonary affections. We also have had an increased number of deaths from Epidemic Diarrhœa

Small Pox was prevalent in the early months of the year, 16 being notified in January, 15 in February, 9 in March, and 14 in April; afterwards, owing to the efficient steps taken and early isolation, we had only a few more cases due to several re-introductions of the disease into the town.

I must refer you for detailed information to the outbreak under the heading of Small Pox, where the number of cases and particulars of the outbreak are given.

We had our biennial recurrence of Measles, which necessitated the closing of the following schools :— Presbyterian, St. George's, St. Mary's, St. Patrick's, St. Catherine's, St. Michael's, St. John's, St. Stephen's (Whelley), Mariebonne, National, St. Andrew's, and St. Thomas's (Clayton Street). As the Local Government Board required a report on the outbreak, a copy of this will be found in the appendices.

Scarlet Fever was less prevalent during this year. and we isolated a greater proportion of the cases.

The detailed work in the Sanitary Department will be found in the body of my report and that of the Chief Inspector of Nuisances (Mr. Sumner).

I must record my thanks for the support given me by each member of the staff, and to Mr. Sumner especially, for his careful supervision of the correspondence and the statistical department, which is becoming more and more arduous each year. To the Medical men practising in the town and adjoining districts I tender my thanks for their cordial support in all sanitary matters, more especially for their co-operation in preventing the spread of infectious diseases.

In conclusion I must also tender my thanks to the Chairman and Members of this Committee for their kind approval of my suggestions and loyal assistance in carrying out the work of this important department.

I am, Gentlemen,

Your obedient Servant,

WM. BERRY,

MEDICAL OFFICER OF HEALTH.

# PART I.

# VITAL STATISTICS.

# REPORT.

## STATISTICAL SUMMARY FOR 1903.

| | | | |
|---|---|---|---|
| Population estimated July 1st, 1903 ..... | | | 62,689 |
| *Marriages* are not ascertained for the County Borough. | | | |
| ,, Annual rate per 1,000 of population, ditto. | | | |
| *Births* | Males..... 1132<br>Females... 1089 | Total ..... | 2,221 |
| Annual rate of births per 1,000 of population ..... | | | 35·47 |
| Ditto for England and Wales... | | | 28·41 |
| Illegitimate births, 108, or 1·72 per 1,000 of population, a percentage of..... | | | 4·8 |
| *Deaths* | Males..... 697<br>Females... 662 | Total ..... | 1,359 |
| Annual rate of mortality ..... | | | 21·69 |
| Ditto in England and Wales ... | | | 15·40 |
| Death rate in 76 great towns..... | | | 16·30 |
| Ditto 103 smaller ,, ..... | | | 14·60 |
| Ditto Rural England & Wales | | | 14·80 |
| Excess of registered births over deaths..... | | | 862 |
| Total deaths from zymotic diseases..... | | | 264 |
| Annual rate of mortality from zymotic diseases | | | 4·18 |
| Ditto in England and Wales..... | | | 1·46 |
| Total deaths from diarrhœa..... | | | 104 |
| Annual rate of mortality from diarrhœa ... | | | 1·24 |
| Infantile rate (deaths per 1,000 births), 1903 | | | 174 |
| Ditto for England and Wales ..... | | | 132 |
| Deaths of infants under one day old number | | | 40 |

*Acreage.*—With an acreage of 2,188, and a population estimated at 62·689, we have 28·65 persons per acre.

*Population.*—The population estimated at the middle of the year (June 30th, 1903) is 62,689, and this may be taken as fairly correct.

*Births.*—The number of births registered during 1903 is 2,221 (males, 1,132 ; females, 1,089), the rate per 1.000 of the population being 35·47. The birth rate, compared with 1902, is 1·95 lower. The illegitimate births number 108, or 4·80 per cent.

*The Mortality Rate.*—The deaths for 1903 number 1,359 (697 males, 662 females), being an excess of 35 males over the females. The rate per 1,000 of the population per annum is 21·69 ; in 1902, 20·25 ; thus we have an increase in deaths of 108, equal to a rate of 1·44.

The death rate for each quarter is as follows :—

| 1903. | All causes. | Zymotics. |
|---|---|---|
| 1st Quarter ... | 20·75 | 4·68 |
| 2nd ,, ... | 21·37 | 5·05 |
| 3rd ,, ... | 19·88 | 4·73 |
| 4th ,, ... | 21·77 | 2·28 |

The zymotic rate shows an increase for 1903 ; it is 4·18. The previous year it was 3·27, showing an increase of 0·91, this being due to an increase in the number of deaths from measles.

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## THE VITAL STATISTICS FOR ENGLAND AND WALES DURING 1903.

ENGLAND AND WALES, 1903.

| | 1903. | 1902. |
|---|---|---|
| Birth rate per 1,000 living..... | 28·4 | 28·6 |
| Death rate ,, ,, ..... | 15·4 | 16·3 |
| Seven epidemic diseases per 1,000 living. | 1·46 | 1·64 |
| Infant mortality per 1,000 births ..... | 132 | 133 |

# TABLE I.

## Weekly Return of Births and Deaths for 1903.

| 1903. Week Ending. | Deaths from all Causes. | Annual Rate per 1,000. | Deaths from Zymotics. | Zymotic Rate. | Births. | Annual Rate per 1,000. |
|---|---|---|---|---|---|---|
| January 3 | 33 | 27·59 | 5 | 4·18 | 53 | 44·31 |
| ,, 10 | 24 | 20·05 | 2 | 1 67 | 40 | 33·44 |
| ,, 17 | 27 | 22·55 | 2 | 1·67 | 32 | 26·73 |
| ,, 24 | 34 | 28·40 | 4 | 3·34 | 44 | 36·76 |
| ,, 31 | 31 | 25·89 | 3 | 2·50 | 36 | 30·07 |
| February 7 | 26 | 21·72 | 7 | 5·84 | 45 | 37·59 |
| ,, 14 | 26 | 21·70 | 9 | 7·51 | 37 | 30·88 |
| ,, 21 | 24 | 20·03 | 4 | 3·33 | 58 | 48·41 |
| ,, 28 | 30 | 25·02 | 8 | 6·67 | 44 | 36·69 |
| March 7 | 24 | 20·01 | 4 | 3·33 | 34 | 28·35 |
| ,, 14 | 33 | 27·52 | 10 | 8·33 | 55 | 45·87 |
| ,, 21 | 32 | 26·68 | 8 | 6·67 | 43 | 35·86 |
| ,, 28 | 26 | 21·66 | 7 | 5·83 | 45 | 37·50 |
| April 4 | 27 | 22·50 | 8 | 6·66 | 38 | 31·66 |
| ,, 11 | 22 | 18·33 | 6 | 4·99 | 47 | 39·16 |
| ,, 18 | 32 | 26·64 | 8 | 5·82 | 36 | 29·97 |
| ,, 25 | 25 | 20·81 | 5 | 4·16 | 45 | 37·38 |
| May 2 | 39 | 32·46 | 17 | 14·14 | 44 | 36·63 |
| ,, 9 | 27 | 22·48 | 5 | 4·16 | 46 | 38·30 |
| ,, 16 | 22 | 18·30 | 7 | 5·82 | 44 | 36·60 |
| ,, 23 | 26 | 21·63 | 1 | ·83 | 50 | 41·59 |
| ,, 30 | 17 | 14·13 | 5 | 4·15 | 35 | 29·09 |
| June 6 | 25 | 20·71 | 4 | 3·32 | 30 | 24·92 |
| ,, 13 | 22 | 18·28 | 3 | 2·49 | 42 | 34·91 |
| ,, 20 | 30 | 24·03 | 8 | 6·64 | 52 | 43·22 |
| ,, 27 | 20 | 16·61 | 3 | 2·49 | 51 | 42·35 |
| July 4 | 25 | 20·76 | 2 | 1·66 | 43 | 35·71 |
| ,, 11 | 29 | 24·06 | — | — | 43 | 35·68 |
| ,, 18 | 26 | 21·57 | 7 | 5·80 | 45 | 37·34 |
| ,, 25 | 21 | 17·41 | 2 | 1·65 | 48 | 39·80 |
| August 1 | 18 | 14·92 | 3 | 2·48 | 40 | 33·16 |
| ,, 8 | 25 | 20·72 | 8 | 6·63 | 50 | 41·45 |
| ,, 15 | 12 | 9·94 | 6 | 4·97 | 39 | 32·31 |
| ,, 22 | 32 | 26·51 | 12 | 9·94 | 49 | 40·59 |
| ,, 29 | 20 | 16·55 | 10 | 8·27 | 36 | 29·80 |
| September 5 | 27 | 22·35 | 8 | 6·62 | 32 | 26·49 |
| ,, 12 | 36 | 29·80 | 8 | 6·07 | 44 | 36·42 |
| ,, 19 | 23 | 19·03 | 6 | 4·96 | 47 | 38·90 |
| ,, 26 | 18 | 14·88 | 3 | 2·48 | 35 | 28·94 |
| October 3 | 23 | 19·02 | 3 | 2·48 | 40 | 33·08 |
| ,, 10 | 19 | 15·71 | 2 | 1·65 | 40 | 33·08 |
| ,, 17 | 24 | 19·83 | 4 | 3·30 | 47 | 38·84 |
| ,, 24 | 19 | 15·70 | 2 | 1·65 | 43 | 35·53 |
| ,, 31 | 23 | 18·99 | 4 | 3.30 | 43 | 35·50 |
| November 7 | 26 | 21·46 | 2 | 1·65 | 54 | 44·59 |
| ,, 14 | 26 | 21·46 | 3 | 2·47 | 36 | 29·72 |
| ,, 21 | 22 | 18·15 | 3 | 2·47 | 40 | 33·00 |
| ,, 28 | 20 | 16·50 | 2 | 1·65 | 45 | 37·12 |
| December 5 | 40 | 33.00 | 1 | ·82 | 47 | 38·77 |
| ,, 12 | 37 | 30·50 | 4 | 3·29 | 47 | 38·74 |
| ,, 19 | 30 | 24·73 | 4 | 3·29 | 41 | 33·80 |
| ,, 26 | 34 | 28·02 | 2 | 1·64 | 21 | 17·31 |

## TABLE II.

### Monthly Table of Deaths from all Causes and Zymotic Diseases with Rates per 1,000 per Annum.

| Month. | No. of Deaths from all Causes. | Annual Rate per 1,000 living. | No. of Deaths from Zymotic Diseases. | Annual Rate per 1,000 living. | Deaths of | |
|---|---|---|---|---|---|---|
| | | | | | Infants under 1 yr. | Persons over 60 yrs. |
| January ..... | 149 | 24·89 | 16 | 2·67 | 33 | 39 |
| February ..... | 106 | 22·11 | 28 | 5·83 | 21 | 14 |
| March..... | 115 | 23·96 | 29 | 6·04 | 23 | 22 |
| April ..... | 106 | 22 07 | 27 | 5·40 | 27 | 15 |
| May ..... | 131 | 21·80 | 35 | 5·82 | 28 | 27 |
| June ..... | 97 | 20 13 | 18 | 3·73 | 23 | 19 |
| July ..... | 101 | 20·95 | 11 | 2·27 | 41 | 12 |
| August ..... | 107 | 17·72 | 39 | 6·45 | 46 | 13 |
| September..... | 104 | 21·51 | 25 | 5·03 | 38 | 13 |
| October ..... | 108 | 17·85 | 15 | 2·47 | 31 | 18 |
| November ..... | 94 | 19·39 | 10 | 2·06 | 30 | 21 |
| December ..... | 141 | 29·06 | 11 | 2·26 | 47 | 21 |
| Totals ..... | 1359 | 21·69 | 264 | 4·18 | 388 | 234 |

## TABLE III.

### Table showing Comparative Statistics between Wigan and other Towns during 1903.

| Town. | Population. | Birth Rate. | Death Rate. | Zymotic Rate. | Infantile Death rate per 1,000 Births. | Average Death rate last 10 years. |
|---|---|---|---|---|---|---|
| Accrington ..... | 44,000 | 21·95 | 14·70 | 1·90 | 130 | 15·87 |
| Birkenhead ..... | 113,343 | 31·0 | 17·0 | 2·2 | 127 | 18·3 |
| Blackburn ..... | 131,079 | 25·2 | 15·7 | ·94 | 158 | 20·3 |
| Blackpool ..... | 53,015 | 22·97 | 12·86 | 1·34 | 135 | 14·23 |
| Bootle..... | 60,800 | 33·05 | 18·2 | 2·5 | 162 | 19·4 |
| Bradford ..... | 283,412 | 23·27 | 16·23 | 1·32 | 147 | 18·2 |
| Burton-on-Trent ... | 51,450 | 26·5 | 11·89 | ·7 | 89 | — |
| Bury ..... | 58,313 | 22·79 | 17·66 | 2·13 | 174 | 18·90 |
| Cardiff ..... | 172,598 | 30·4 | 13·9 | 1·3 | 122 | 17·1 |
| Carlisle ..... | 46,500 | 28·4 | 17·4 | 1·2 | 118 | 19·0 |
| Coventry ..... | 72,684 | 29·7 | 16·6 | 2·0 | 114 | 16·6 |
| Crewe..... | 44,167 | 32·9 | 14·3 | 1·7 | 141 | 15·9 |
| Derby..... | 118,707 | 27·09 | 13·45 | ·91 | 128 | 15·8 |
| East Ham ..... | 110,451 | 34·4 | 11·4 | 1·5 | 113 | 13·6 |
| Folkestone..... | 32,150 | 22·8 | 12·1 | 1·2 | 114 | 13·5 |
| Halifax ..... | 106,800 | 21·0 | 14·9 | ·66 | 124 | — |
| Hanley ..... | 63,166 | 34·8 | 19·0 | 2·3 | 170 | 19·6 |
| Hastings ..... | 66,200 | 18·26 | 12·87 | ·64 | 107 | 14·61 |
| Huddersfield..... | 94.973 | 23·79 | 16·73 | ·84 | 120 | 17·40 |
| Kingston-on-Hull .. | 249,639 | 31·2 | 16·6 | 2·2 | 162 | 18·1 |
| Leigh ..... | 43,000 | 33·2 | 17·88 | 4·4 | 187 | 18·78 |
| Maidstone ..... | 33,832 | 23·9 | 12·9 | ·88 | 128 | 16·1 |
| Merthyr Tydvil ... | 71,651 | 38·4 | 18·98 | 2·6 | 153 | 23·1 |
| Oldham ..... | 138,786 | 25·6 | 18·6 | 2·4 | 160 | 20·6 |

TABLE III.—Continued.

| TOWN. | Population. | Birth Rate. | Death Rate. | Zymotic Rate. | Infantile Death rate per 1,000 Births | Average Death rate last 10 years. |
|---|---|---|---|---|---|---|
| Plymouth ..... | 112,022 | 25·42 | 16·55 | 1·04 | 144 | 18·64 |
| Reading ..... | 75,277 | 26 98 | 12·92 | ·97 | 121 | 14·23 |
| South Shields ..... | 105,325 | 34·5 | 17·2 | 1·02 | 132 | 19·5 |
| Rochdale ..... | 84,824 | 24·4 | 17 1 | 1·38 | 138 | — |
| Stockport ..... | 95,709 | 31·57 | 20·06 | 2·52 | 183 | 21·103 |
| Tottenham ..... | 117,797 | 29·5 | 10·7 | 1·4 | 124 | 13·53 |
| West Bromwich ... | 66,558 | 33·9 | 16·3 | 1·9 | 164 | 19·3 |
| Wolverhampton ... | 96,994 | 30·4 | 15·2 | 2·00 | 152 | 20·15 |
| **WIGAN** ..... | **62,689** | **35·47** | **21·69** | **4·18** | **174** | **21·24** |
| Lancaster ..... | 42,570 | 24·94 | 10·99 | ·72 | 109 | 15·11 |
| York ..... | 80,186 | 29·1 | 16·2 | 2·0 | 154 | 18·0 |

## TABLE IV.

DEATH RATE FOR WIGAN DURING THE LAST TEN YEARS.

| | | |
|---|---|---|
| 1894 ..... | 18·90 | Average for 10 years, 21·24. |
| 1895 ..... | 22·52 | |
| 1896 ..... | 23·09 | |
| 1897 ..... | 20·99 | |
| 1898 ..... | 18·88 | |
| 1899 ..... | 21·91 | |
| 1900 ..... | 21·95 | |
| 1901 ..... | 22·30 | |
| 1902 ..... | 20·25 | |
| 1903 ..... | 21·69 | |

*Infantile Mortality.*—The number of deaths of children under one year is 388, or 174 per 1,000 births, and of children over one year and under 5 years 284, or 4·53 per 1,000 of the population.

In regard to this infantile mortality there were 40 deaths in children who did not live more than 24 hours, and if we deduct these there would only be 348 deaths, or 156 per 1,000 births; in a large birth-rate we necessarily have a larger proportion of premature births.

*Senile Mortality.*—The number of deaths of persons of 60 years of age and over is 234, or 3·71 per 1,000 of population.

## WIGAN CENSUS, 1901.

| WARD. | Separate Families. | HOUSES. | | | | Tenements with less than five rooms. | PERSONS. | | Totals. |
|---|---|---|---|---|---|---|---|---|---|
| | | Inhabited. | Uninhabited. | | | | Males. | Females. | |
| | | | In Occupation. | Not in Occupation. | B'ding. | | | | |
| No. 1, or St. George Ward ... | 959 | 919 | 87 | 17 | ... | 753 | 2406 | 2524 | 4930 |
| No. 2, or Lindsay Ward ..... | 924 | 913 | 22 | 12 | 6 | 592 | 2310 | 2472 | 4782 |
| No. 3, or St. Catharine Ward | 1234 | 1193 | 20 | 5 | .., | 863 | 3169 | 3435 | 6604 |
| No. 4, or St. Patrick Ward... | 1586 | 1567 | 46 | 10 | 3 | 954 | 4714 | 4470 | 9184 |
| No. 5, or St. Thomas Ward... | 939 | 890 | 42 | 4 | ... | 703 | 2394 | 2451 | 4845 |
| No. 6, or Poolstock Ward ... | 977 | 950 | 18 | 3 | 4 | 523 | 2424 | 2613 | 5037 |
| No. 7, or Victoria Ward ..... | 999 | 949 | 33 | 4 | 4 | 688 | 2440 | 2586 | 5026 |
| No. 8, or St. Andrew Ward... | 1684 | 1662 | 29 | 14 | 29 | 501 | 4658 | 4622 | 9280 |
| No. 9, or Swinley Ward .. ... | 1386 | 1368 | 46 | 41 | 14 | 453 | 3224 | 4043 | 7267 |
| No. 10, or All Saints Ward... | 709 | 709 | 327 | 28 | 25 | 360 | 1811 | 1925 | 3736 |
| Canal Boats ..... | ... | ... | ... | ... | ... | ... | 60 | 19 | 79 |
| Wards not stated ..... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Totals..... | 11388 | 11120 | 670 | 138 | 85 | 6390 | 29610 | 31160 | 60770 |

Percentage of increase in population, England and Wales since Census of 1891..... 12·15.

The preceding period, 1881-91..... 11·65.

Increase in Wigan ..... 10·46.

### County Borough of Wigan.

### No. of Houses Inhabited, &c., 25th July, 1903.

| WARD. | Inhabited. | Empty. | Building. | Total. | Average per House. | Population. |
|---|---|---|---|---|---|---|
| St. George..... | 924 | 10 | 7 | 941 | 5·465 | 5049 |
| Lindsay ..... | 961 | 3 | 48 | 1012 | ,, | 5252 |
| St. Catharine ..... | 1224 | 12 | 4 | 1240 | ,, | 6683 |
| St. Patrick ..... | 1622 | 30 | 15 | 1667 | ,, | 8864 |
| St. Thomas ..... | 873 | 6 | — | 879 | ,, | 4771 |
| Poolstock ..... | 1003 | 7 | — | 1010 | ,, | 5481 |
| Victoria..... | 962 | 4 | 6 | 972 | ,, | 5257 |
| St. Andrew ..... | 1867 | 16 | 59 | 1942 | ,, | 10203 |
| Swinley ..... | 1433 | 23 | 4 | 1460 | ,, | 7821 |
| All Saints ..... | 673 | 15 | 1 | 689 | ,, | 3678 |
| Total ..... | 11542 | 126 | 144 | 11812 | ... | 63059 |

I am indebted to Mr. Robert Halliwell, J.P., and Mr. Southworth for this return.

TABLE I.—Vital Statistics of whole District during 1903 and Previous Years. Name of District—Wigan.

| Year. | Population estimated to Middle of each Year. | Births. | | Total Deaths Registered in the District. | | | | Total Deaths in Public Institutions in Distric | Deaths of Non-residents Registered in Public Institutions in Di-trict. | Deaths of Residents registered in Public Institutions beyond the District. | Nett Deaths at all Ages belonging to the District. | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Under 1 Year of Age. | | At all Ages. | | | | | | |
| | | Number. | Rate. | Number. | Rate per 1000 Births Registered | Number. | Rate.* | | | | Number. | Rate.* |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
| 1893 | 56615 | 2316 | 41·2 | 438 | 187 | 1388 | 24·5 | 190 | | | | |
| 1894 | 57190 | 2146 | 37·9 | 341 | 158 | 1100 | 19·3 | 194 | | | | |
| 1895 | 57765 | 2256 | 39·16 | 413 | 187 | 1317 | 23·18 | 244 | | | | |
| 1896 | 58340 | 2144 | 37·10 | 400 | 186 | 1376 | 23·84 | 158 | | | | |
| 1897 | 58915 | 2247 | 38·58 | 398 | 175 | 1270 | 21·80 | 246 | 106 | | | |
| 1898 | 59590 | 2159 | 35·70 | 369 | 170 | 1182 | 19·54 | 225 | 91 | | | |
| 1899 | 60165 | 2148 | 35·36 | 422 | 195 | 1368 | 22·63 | 253 | 116 | | | |
| 1900 | 60740 | 2177 | 36·00 | 404 | 190 | 1520 | 25·06 | 290 | 133 | | 1387 | 22·90 |
| 1901 | 60923 | 2245 | 36·40 | 457 | 203 | 1537 | 24·87 | 280 | 158 | | 1379 | 22·30 |
| 1902 | 61827 | 2311 | 37·42 | 366 | 158 | 1393 | 22·58 | 268 | 142 | | 1251 | 20·25 |
| Averages for years 1893—1902 | 59207 | 2214 | 37·48 | 400 | 180 | 1345 | 22·73 | 234 | | | | |
| 1903 | 62689 | 2221 | 35·47 | 388 | 174 | 1511 | 24·09 | 313 | 152 | | 1359 | 21·69 |

* Rates in columns 4, 8, and 13 calculated per 1,000 of estimated population.

Area of District in acres (exclusive of area covered by water) 2,188. At Census of 1901 the total population at all ages was 60,774 ; number of inhabited houses 11,120 ; average number of persons per house 5·4.

TABLE II.—Vital Statistics of Separate Localities in 1902 and Previous Years.

Name of District—Wigan County Borough.

| Year. | Population estimated to middle of each year. | Births registered. | Deaths at all ages. | Deaths under 1 year. |
|---|---|---|---|---|
| 1893 ..... | 56615 | 2316 | 1388 | 438 |
| 1894 ..... | 57193 | 2146 | 1100 | 341 |
| 1895 ..... | 57765 | 2256 | 1317 | 413 |
| 1896 ..... | 58340 | 2144 | 1376 | 400 |
| 1897 ..... | 58915 | 2247 | 1270 | 398 |
| 1898 ..... | 59590 | 2159 | 1182 | 369 |
| 1899 ..... | 60165 | 2148 | 1368 | 422 |
| 1900 ..... | 60740 | 2177 | 1520 | 404 |
| 1901 ..... * | 60923 | 2245 | 1537 | 457 |
| 1902 ..... | 61827 | 2311 | 1393 | 366 |
| Averages of Years 1893 to 1902 ... | 59207 | 2214 | 1345 | 400 |
| 1903 ..... | 62689 | 2221 | 1359 | 388 |

TABLE III.—Cases of Infectious Disease Notified During the Year 1902.

Name of District—Wigan County Borough.

| NOTIFIABLE DISEASE. | CASES NOTIFIED IN WHOLE DISTRICT. | | | | | | | Cases removed to Hospital. |
|---|---|---|---|---|---|---|---|---|
| | At all ages. | Under 1. | 1 to 5. | 5 to 15. | 15 to 25. | 25 to 65. | 65 and upw'ds. | |
| Small-pox ..... | 66 | 1 | 2 | 8 | 10 | 44 | 1 | 66 |
| Diphtheria ..... | 38 | — | 20 | 11 | 2 | 5 | — | — |
| Membran. croup | — | — | — | — | — | — | — | — |
| Erysipelas ..... | 51 | 1 | 2 | 3 | 4 | 36 | 5 | — |
| Scarlet fever ... | 362 | 3 | 116 | 216 | 15 | 12 | — | 200 |
| Enteric fever ... | 51 | — | 2 | 13 | 10 | 26 | — | 29 |
| Puerperal fever.. | 5 | — | — | — | 5 | — | — | — |
| Chicken-pox ... | — | — | — | — | — | — | — | — |
| Measles..... | 1453 | 108 | 927 | 406 | 10 | 1 | 1 | — |
| Totals ..... | 2026 | 113 | 1069 | 657 | 56 | 124 | 7 | 295 |

TABLE IV.—Causes of, and Ages at, Death during Year 1903.

Name of District—Wigan County Borough.

| CAUSES OF DEATH. | DEATHS IN OR BELONGING TO WHOLE DISTRICT AT SUBJOINED AGES. | | | | | | | Total Deaths in Public Institutions in District. |
|---|---|---|---|---|---|---|---|---|
| | All Ages. | Under 1 Year. | 1 and under 5. | 5 and under 15. | 15 and under 25. | 25 and under 65. | 65 and upwards. | |
| Small-pox ..... | 1 | ... | ... | ... | ... | 1 | ... | ... |
| Measles ..... | 104 | 18 | 80 | 6 | ... | ... | ... | ... |
| Scarlet fever ... | 26 | ... | 21 | 4 | ... | 1 | ... | ... |
| Whoopi'g cough | 28 | 12 | 13 | 3 | ... | ... | ... | ... |
| Diphtheria and membran. croup | 13 | ... | 9 | 3 | ... | 1 | ... | ... |
| Enteric fever ... | 11 | ... | ... | 2 | 3 | 6 | ... | ... |
| Diarrhœa ..... | 78 | 54 | 21 | 1 | ... | 2 | ... | ... |
| Puerperal fever. | 1 | ... | ... | ... | ... | 1 | ... | ... |
| Erysipelas ..... | 2 | ... | ... | ... | ... | 1 | 1 | ... |
| Phthisis ..... | 74 | 6 | 4 | 5 | 8 | 49 | 2 | ... |
| Other tubercular diseases ..... | 19 | 6 | 8 | ... | 1 | 4 | ... | ... |
| Cancer, malignant disease ... | 32 | ... | 2 | ... | 2 | 24 | 4 | ... |
| Bronchitis ..... | 141 | 28 | 10 | 1 | 2 | 65 | 35 | ... |
| Pneumonia ..... | 190 | 48 | 47 | 4 | 12 | 72 | 7 | ... |
| Premature birth | 45 | 45 | ... | ... | ... | ... | ... | ... |
| Heart diseases... | 60 | 1 | ... | 1 | 3 | 38 | 17 | ... |
| Accidents..... | 26 | ... | 4 | 4 | 3 | 14 | 1 | ... |
| Suicides ..... | 9 | ... | ... | ... | ... | 6 | 3 | ... |
| All other causes | 499 | 170 | 62 | 18 | 13 | 148 | 88 | ... |
| All causes ..... | 1359 | 388 | 281 | 52 | 47 | 433 | 158 | 298 |

# List of Streets in which Deaths from the following diseases have occurred :—

| Street. | Ward. | Small-pox. | Scarlet. | Enteric. | Typhus. | Diphtheria. | Whoop. Cough. | Measles. | Diarrhœa. | Pulmonary. | Rheumatism. | Cancer. | Others. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Alliance Street.. | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 2 |
| Altham's Yard.. | 1 | ... | ... | ... | .. | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Arundel Street.. | 2 | ... | 1 | ... | ... | ... | 2 | ... | ... | ... | ... | ... | 1 | 4 |
| Ardern Street ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Amy Lane ..... | 4 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Anderton Street | 4 | ... | 1 | ... | ... | ... | ... | 1 | ... | 4 | ... | ... | 1 | 7 |
| Ashton Street ... | 4 | ... | ... | ... | ... | ... | ... | 2 | ... | 3 | .. | ... | 4 | 9 |
| Acton's Court ... | 4 | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | ... | ... | ... | 2 |
| Adelaide Street. | 5 | ... | 1 | ... | ... | ... | ... | ... | 2 | 4 | ... | ... | 5 | 12 |
| Acton's Walk ... | 5 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | 1 | 3 |
| Ashton's Yard, Princess Street | 5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | 1 | 1 |
| Addison Street.. | 7 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Addison's Yard, Addison Street | 7 | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Appleton Street. | 7 | .. | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 2 | 3 |
| Acton's Terrace. | 9 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 |
| Alfred Street ... | 9 | ... | ... | ... | ... | ... | ... | 2 | ... | ... | ... | ... | ... | 2 |
| Ashton's Yard .. | 9 | ... | ... | ... | ... | .. | ... | 1 | 1 | ... | ... | ... | 2 | 4 |
| Atherton Street | 10 | ... | ... | ... | ... | .. | ... | ... | 1 | ... | ... | ... | 2 | 3 |
| Atherton's Yard, Hallgate ..... | 10 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 |
| Bold Street ..... | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | .. | ... | ... | ... | 1 |
| Butler Street..... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 2 |
| Boys' Well Lane | 1 | ... | ... | ... | ... | ... | ... | 1 | 1 | 4 | ... | ... | 3 | 9 |
| Black Swan Ter. | 1 | ... | ... | 1 | ... | ... | 1 | 2 | 1 | .. | ... | ... | 1 | 6 |
| Burlingt'n Street | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3 | 3 |
| Bank Terrace.... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Bottling Wood... | 2 | ... | 1 | ... | ... | ... | ... | 3 | ... | 2 | ... | ... | 7 | 13 |
| Bradshaw Street | 2 | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | 1 | 2 | 5 |
| Bedford Street... | 3 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 2 |
| Bolton Street ... | 3 | ... | ... | ... | ... | ... | ... | ... | 2 | 2 | ... | ... | 5 | 9 |
| Birkett Bank ... | 3 | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | 2 | 2 |
| Birkett Bank Ter | 3 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Birkett Street... | 3 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 2 |
| Birkett Bk (even) | 4 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 2 | 3 |
| Bankes Street ... | 4 | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Bryham Street... | 4 | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Belvoir Street ... | 4 | ... | ... | ... | ... | .. | ... | ... | ... | 1 | ... | ... | 1 | 2 |
| Bradshawgate ... | 4 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Brown Street ... | 4 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Brookhouse St... | 4 | ... | ... | ... | .. | ... | ... | ... | ... | 2 | ... | ... | 1 | 3 |
| Baldwin Street.. | 4 | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | 1 | 3 |
| Brown's Yard, Queen Street.. | 5 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | .. | .. | ... | 1 |
| Barnes Court, Queen Street.. | 5 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | .. | 1 | 2 |
| Bridgewater St.. | 5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Bradford Street | 5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | 3 | 3 |
| Bradford Place.. | 5 | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | 1 | ... | 1 | 4 |
| Bridge Street .. | 5 | .. | 1 | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | 3 | 6 |
| Brook Street..... | 6 | ... | 1 | ... | ... | ... | ... | ... | 2 | ... | ... | ... | 3 | 3 |
| Byrom Street ... | 6 | ... | ... | 1 | ... | ... | ... | 1 | ... | 4 | ... | ... | 8 | 14 |
| Byron Street ... | 6 | ... | ... | ... | ... | ... | 1 | .. | ... | ... | ... | ... | 1 | 2 |
| Brown Street ... | 7 | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | ... | ... | ... | 2 |
| Ball Street ..... | 8 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 |
| Bridge End ..... | 8 | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | 1 | 3 |
| Buckley Terrace | 8 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | 2 |
| Beech Hall St.... | 8 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 2 | 3 |
| Banks's Yard, Coppull Lane. | 9 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Bishopgate ..... | 10 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Bailey's Court... | 10 | ... | ... | ... | ... | ... | ... | 1 | ... | 2 | ... | ... | 1 | 4 |
| Elephan's Yard | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 |

| Street. | Ward. | Small-pox. | Scarlet. | Enteric. | Typhus. | Diphtheria. | Whoop. Cough. | Measles. | Diarrhœa. | Pulmonary. | Rheumatism. | Cancer. | Others. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Clarence Street. | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Church Street... | 1 | ... | ... | ... | ... | ... | ... | .. | ... | 1 | ... | ... | 1 | 2 |
| Castle Street.... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | 1 | 3 |
| Crawford Ter.... | 2 | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | .. | 2 | 2 |
| Coop Street..... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Cheltenham St. | 3 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Caunce Street... | 3 | ... | ... | ... | ... | ... | 1 | 1 | 1 | 3 | ... | 1 | 6 | 13 |
| Catherine Street | 3 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Cecil Street ..... | 3 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 1 | 2 |
| Chatham Street | 4 | ... | .. | ... | ... | .. | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Cambridge St.... | 4 | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | 4 | 6 |
| Chancery Street | 4 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | 2 | 4 |
| Church Terrace.. | 4 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 2 | 3 |
| Caroline Street. | 5 | ... | ... | ... | ... | ... | ... | 1 | 1 | 1 | ... | 1 | 3 | 7 |
| Chapel Street ... | 5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Cross Street..... | 5 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | 5 | 7 |
| Chapel Lane..... | 5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3 | 3 |
| Chapel Lane..... | 6 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 2 |
| Chadwick St.... | 6 | ... | 1 | ... | ... | 1 | ... | ... | ... | 1 | ... | ... | 5 | 8 |
| Cudworth Street | 6 | ... | 1 | ... | ... | ... | 2 | ... | ... | ... | ... | ... | 2 | 5 |
| Corporation St.. | 6 | ... | 2 | 2 | ... | ... | ... | ... | ... | ... | ... | ... | 3 | 7 |
| Cygnet Street ... | 6 | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Coronation St.... | 6 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Clayton Street... | 7 | ... | ... | ... | ... | ... | ... | ... | ... | 6 | ... | ... | 10 | 16 |
| Clare Street..... | 7 | ... | 1 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 2 |
| Canal Street..... | 8 | ... | ... | ... | ... | ... | 1 | 1 | ... | 3 | ... | ... | 1 | 6 |
| Coppull Lane... | 9 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | 2 |
| Cherry Croft ... | 9 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | .. | 1 |
| Colin Street ..... | 9 | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | 1 | 1 |
| Chapel Lane ..... | 10 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 2 |
| Cooper's Row.... | 10 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Crook's Yard, Hallgate ..... | 10 | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | ... | ... | 1 | 3 |
| Derby Street ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Dorset Street..... | 3 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 2 | 3 |
| Darlington St.... | 4 | ... | ... | ... | ... | 1 | ... | ... | 1 | 2 | ... | ... | 1 | 5 |
| Darlington St. East ..... | 4 | ... | ... | ... | ... | ... | ... | 1 | 1 | 4 | 1 | 1 | 11 | 19 |
| Dean Street ..... | 4 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 2 |
| Douglas St. East | 4 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 |
| Driving Lane ... | 5 | ... | ... | ... | ... | ... | ... | ... | 2 | 1 | ... | 1 | 1 | 5 |
| Dobson's yard, Princess Street | 5 | ... | ... | ... | ... | ... | ... | ... | 2 | 1 | ... | ... | 2 | 5 |
| Drake Street..... | 6 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | 1 | 3 |
| Delph Street ... | 8 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 2 |
| Diggle Street.... | 8 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 1 |
| Dicconson Cres.. | 9 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Dicconson Street | 9 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 3 | 4 |
| Dicconson Ter... | 9 | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 2 |
| Duke Street ..... | 9 | ... | ... | ... | ... | ... | 1 | ... | ... | 2 | ... | ... | ... | 3 |
| Douglas Road ... | 9 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Douglas Street .. | 10 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 2 |
| Darlington St.... | 10 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Dorning Street.. | 10 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Every Street. ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | 1 | 3 |
| Eckersley Street | 2 | ... | ... | ... | .. | ... | 1 | ... | ... | ... | ... | ... | 1 | 2 |
| Ellis Street..... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | 1 | 3 |
| Essex Stiret..... | 3 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | 2 |
| Egerton Street .. | 5 | ... | ... | ... | ... | ... | ... | .. | ... | 1 | ... | ... | 2 | 3 |
| Eleanor Street... | 6 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Edith Street..... | 7 | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | ... | 2 |
| Eccleston Street | 9 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3 | 3 |
| Ellen Street ..... | 10 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Fairhurst's Yard | 1 | ... | ... | ... | ... | 2 | ... | ... | ... | 1 | ... | ... | 1 | 4 |

| Street. | Ward. | Small-pox. | Scarlet. | Enteric. | Typhus. | Diphtheria. | Whoop. Cough. | Measles. | Diarrhœa. | Pulmonary. | Rheumatism. | Cancer. | Others. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Foundry Street . | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 2 |
| Fairhurst's Yd., B. Street ..... | 3 | ... | 1 | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Florence Street.. | 3 | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | 2 | 4 |
| Farrimond's Yd. | 3 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 2 | 3 |
| Frederick Street | 3 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Farrim'nd's Row | 5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Fowden Street... | 5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Frith Street..... | 6 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 2 | 3 |
| Frog Lane ..... | 8 | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | ... | 1 | 5 | 8 |
| Field Street..... | 8 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Foster Street..... | 8 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 |
| First Avenue ... | 8 | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | 1 | 1 | 4 |
| Folly ..... | 9 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Freckleton St.... | 9 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 3 | 3 |
| Foy Street ..... | 10 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | 2 |
| Frog Lane ... .. | 10 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 2 |
| Fleming's Yard, Hallgate ..... | 10 | ... | .. | ... | ... | ... | ... | .. | ... | .. | ... | ... | 1 | 1 |
| Frank Street ... | 10 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Greenough St. | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Greenough Gdns | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Greenough St.... | 2 | ... | 1 | ... | ... | ... | ... | ... | ... | 2 | ... | ... | ... | 3 |
| Golborne Street. | 3 | ... | ... | ... | .. | ... | 1 | ... | ... | 1 | ... | ... | 3 | 5 |
| Gaskell Street... | 3 | ... | ... | ... | .. | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Gee Street ..... | 4 | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | 2 |
| Gilroy Street ... | 4 | ... | ... | ... | ... | ... | .. | ... | ... | 1 | ... | ... | 1 | 2 |
| Grundy's Yard.. | 4 | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | 2 |
| Greeno'gh's Row | 4 | ... | 1 | ... | ... | ... | ... | 1 | ... | 2 | ... | ... | 5 | 9 |
| Garden Street ... | 4 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 | 1 | 3 |
| German's Yard. | 5 | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | 1 | 1 |
| Green Street ... | 5 | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | 1 | 1 |
| Gerard Street ... | 6 | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Great George St. | 7 | ... | 1 | ... | ... | ... | ... | 1 | 2 | 4 | ... | 1 | 14 | 23 |
| Gidlow Lane ... | 8 | ... | ... | ... | ... | ... | ... | 1 | 1 | 2 | ... | ... | 13 | 17 |
| Glebe End St.... | 8 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 2 |
| Griffin Yard..... | 9 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Golden Cross Yd. | 9 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Grayson's Yard | 9 | ... | ... | ... | ... | ... | ... | 2 | ... | 2 | ... | ... | 1 | 5 |
| Gibson's Yard... | 9 | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | ... | 2 |
| Gee's Court ..... | 10 | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | 1 | 1 |
| Greenbank Cot.. | 10 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 |
| Howard's Yard.. | 1 | .. | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Harrison s Yd., Lime Street ... | 1 | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Howard Street... | 2 | ... | ... | ... | ... | ... | .. | .. | ... | ... | ... | ... | 1 | 1 |
| Holland Street... | 3 | ... | ... | ... | ... | ... | ... | ... | ... | 5 | ... | ... | 7 | 12 |
| Higham Street.. | 4 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 3 | 4 |
| Hardy's Place ... | 4 | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | 1 | 1 |
| Hunt Street..... | 4 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Hardybutts ..... | 4 | ... | ... | 1 | ... | ... | ... | 4 | 1 | 3 | ... | 1 | 12 | 22 |
| Henry Street..... | 5 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 2 |
| Hodson Street... | 5 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 4 | 5 |
| Haslam's Yard,. | 5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Hopwood Street | 5 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | 2 |
| Hill's Yard, Bridge St..... | 5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Henhurst Bridge | 6 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 2 | 3 |
| Hardman Street | 6 | ... | ... | ... | ... | ... | .. | ... | 1 | ... | .. | ... | ... | 1 |
| Herbert Street.. | 7 | ... | ... | ... | ... | ... | ... | .. | 1 | 1 | ... | ... | ... | 2 |
| Howard's Yard. | 7 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 |
| Hey Street..... | 8 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 3 | 4 |
| Horsefield Street | 8 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Holt Street ..... | 8 | ... | ... | ... | ... | ... | ... | 1 | ... | 2 | ... | ... | 2 | 5 |

| Street. | Ward. | Small-pox. | Scarlet. | Enteric. | Typhus. | Diphtheria. | Whoop. Cough. | Measles. | Diarrhœa. | Pulmonary. | Rheumatism. | Cancer. | Others. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Hardy Street ... | 8 | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | ... | 2 |
| Holme Street .... | 9 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Holme Terrace... | 9 | ... | ... | ... | ... | ... | 1 | ... | 1 | ... | ... | ... | ... |
| High Street ..... | 9 | ... | ... | ... | ... | ... | ... | ... | ... | 3 | ... | ... | 1 |
| Hilton Street.... | 9 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Hilton's Yard ... | 10 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Harrogate Street | 10 | ... | ... | ... | ... | ... | 2 | ... | ... | 2 | ... | ... | 1 |
| Hope Street..... | 10 | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | 1 |
| Hallgate ..... | 10 | ... | ... | ... | ... | ... | ... | 1 | 1 | 2 | ... | ... | 5 |
| Isabella Street... | 3 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Ironmonger L'ne | 5 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 3 |
| Ingram Street ... | 8 | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | 3 |
| Jockey Terrace.. | 1 | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | ... | ... | 2 |
| Jane Street..... | 3 | ... | ... | ... | ... | ... | .. | ... | ... | 1 | ... | ... | ... |
| John Street..... | 4 | ... | ... | ... | ... | ... | ... | ... | 1 | 2 | .. | ... | 3 |
| Johnson's Place. | 5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 |
| James Street, Bradford St... | 5 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... |
| James Street, Chapel Lane .. | 5 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... |
| Jordan's Entry.. | 10 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Kay Street ... .. | 1 | .. | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... |
| Kendrick Street. | 3 | ... | ... | .. | .. | ... | ... | ... | 1 | 1 | ... | ... | 1 |
| Kirkless Street... | 3 | ... | ... | ... | ... | ... | 1 | ... | 1 | 1 | ... | ... | 1 |
| Kent Street..... .. | 4 | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | 1 |
| Kearsley Street . | 8 | ... | .. | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 |
| Kendal Street ... | 8 | ... | 1 | ... | .. | ... | ... | ... | ... | 2 | ... | ... | 2 |
| Kenyon Road ... | 9 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... |
| Kenyon Street... | 9 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| King Street..... | 10 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Latham's yard, Millgate ..... | 1 | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Low Street ..... | 1 | ... | ... | .. | ... | ... | ... | 1 | 1 | 1 | ... | ... | ... |
| Lower Morris St. | 1 | ... | 1 | ... | ... | ... | ... | 1 | 1 | 4 | ... | ... | 5 |
| Lime Street ..... | 1 | ... | ... | ... | ... | ... | ... | 2 | ... | 2 | ... | 1 | 12 |
| Lamb Street..... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | 1 |
| Longshoot ..... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | 3 | ... | ... | 1 |
| Lindsay Street .. | 2 | .. | ... | ... | ... | ... | ... | ... | . | 1 | ... | ... | ... |
| Linney Street.... | 3 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Lorne Street ..... | 3 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... |
| Leader Street.... | 3 | ... | 1 | ... | ... | ... | ... | ... | .. | 1 | ... | ... | ... |
| Lowe Square, Hardybutts ... | 4 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... |
| Leigh Street ... | 4 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... |
| Lymm Street .... | 4 | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... |
| Latham's Yard, Queen Street.. | 5 | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Lyon's Yard, Ir'nm'ng'r L'ne | 5 | ... | . . | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... |
| Latham's Yard.. | 5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Letterewe Street | 6 | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | ... |
| Lea Street. ..... | 7 | ... | ... | ... | ... | ... | ... | 1 | 1 | 3 | ... | ... | ... |
| Leeds Street..... | 7 | ... | ... | ... | ... | ... | .. | ... | 1 | ... | ... | ... | ... |
| Littler's Yard, Clayton Street | 7 | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | ... |
| Lyon Street ..... | 7 | ... | ... | ... | ... | ... | ... | .. | ... | 2 | ... | ... | ... |
| Layland Street.. | 8 | . . | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... |
| Lower St. Stephen Street | 8 | .. | ... | ... | ... | ... | ... | 1 | 2 | ... | ... | ... | ... |
| Lord Street ..... | 9 | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | 2 | ... |
| Library Street... | 10 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Millgate ..... | 1 | ... | .. | ... | ... | ... | ... | .. | ... | 1 | 1 | ... | ... |
| Marsh Lane, | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | ... |
| Mount Street ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... |

| Street. | Ward | Small-pox. | Scarlet. | Enteric. | Typhus | Diphtheria. | Whoop. Cough. | Measles. | Diarrhœa. | Pulmonary. | Rheumatism. | Cancer. | Other. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ınt Street ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| t Street ..... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 |
| ris Row ..... | 3 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 2 |
| Cormick St... | 4 | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | 1 | 1 |
| ıch'st'r Place | 4 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| sh's Court, | | | | | | | | | | | | | | |
| hapel Lane... | 5 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 2 |
| verley Street | 6 | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | 2 | 4 |
| ton Street ... | 6 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | 2 |
| l Street..... | 7 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| ly Lane..... | 7 | ... | ... | ... | ... | ... | ... | 1 | ... | 2 | ... | ... | 5 | 8 |
| on Street.,... | 7 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| re's Build'gs | 8 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 |
| garet Street, | 8 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| rfield Street | 8 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 | 2 |
| dow Street... | 8 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| ris's Yard, | | | | | | | | | | | | | | |
| uke Street ... | 9 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| 'bonne Pl'ce | 9 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| lstone Yard.. | 9 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 2 |
| yneux's Yd., | | | | | | | | | | | | | | |
| Vigan Lane... | 9 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 |
| lgate..... | 10 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| ket Street ... | 10 | ... | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | 1 | 1 |
| rsden Street., | 10 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 2 |
| vman Street . | 2 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | .. | ... | 1 |
| thumberland | | | | | | | | | | | | | | |
| treet..... | 3 | ... | .. | ... | .. | ... | ... | 1 | ... | ... | ... | ... | 1 | 2 |
| ille Street ... | 3 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | 2 |
| v Street ..... | 8 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| v Square..... | 9 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 2 |
| v Lodge ..... | 9 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| hard Street... | 1 | ... | ... | ... | ... | .. | ... | ... | ... | 1 | ... | ... | 1 | 2 |
| ord Street ... | 2 | ... | . | ... | ... | ... | ... | ... | ... | 2 | ... | ... | 1 | 3 |
| orne Street .. | 2 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| ell Street ..... | 4 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| i'ndy's H'ses | 6 | ... | 1 | ... | ... | ... | ... | ... | 2 | 1 | ... | ... | 1 | 5 |
| field Street... | 6 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 |
| nesher's Y'rd | | | | | | | | | | | | | | |
| layton Street | 7 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| nrose Hill ... | 2 | ... | 1 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 3 |
| tland Street. | 2 | ... | ... | 1 | ... | .. | ... | ... | ... | ... | ... | ... | 1 | 2 |
| ch Street..... | 3 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 |
| t Lane ..... | 3 | ... | ... | ... | ... | .. | 1 | 2 | ... | 6 | ... | ... | 10 | 19 |
| rs's Court, | | | | | | | | | | | | | | |
| auxhall Road | 4 | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| dlebury's Yd | | | | | | | | | | | | | | |
| P. Street.... | 4 | ... | 1 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| ree's Yard, | | | | | | | | | | | | | | |
| ridge Street.. | 5 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| ncess Street.. | 5 | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | .. | ... | 7 | 9 |
| ter's Square, | | | | | | | | | | | | | | |
| rincess Street | 5 | ... | ... | ... | ... | ... | ... | ... | 1 | 1 | ... | ... | 1 | 1 |
| e Shop Yard. | 6 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| lstock Lane.. | 6 | .. | ... | 1 | ... | ... | ... | ... | ... | 3 | ... | ... | 4 | 8 |
| l Street ..... | 6 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | 4 | 6 |
| k Street ..... | 6 | ... | . | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| tery Street... | 6 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 2 |
| tery Road ... | 6 | .. | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| er's Alley, | | | | | | | | | | | | | | |
| ottery ..... | 6 | ... | ... | ... | ... | ... | ... | 2 | ... | ... | ... | ... | ... | 2 |
| t Street ..... | 6 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 2 |
| nyhurst Str't | 7 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |

| Street. | Ward. | Small-pox. | Scarlet. | Enteric. | Typhus. | Diphtheria. | Whoop. Cough. | Measles. | Diarrhœa. | Pulmonary. | Rheumatism. | Cancer. | Other. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Pitt Street..... | 7 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 |
| Prescott Street.. | 8 | ... | ... | ... | ... | ... | ... | ... | 3 | 2 | ... | ... | 4 | 9 |
| Park Road ..... | 8 | ... | 1 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 4 | 6 |
| Penson Street ... | 9 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Penson's Yard, Standishgate.. | 9 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 2 |
| Parr's Court, Douglas Street | 10 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 2 |
| Queen Street..... | 5 | ... | 1 | ... | ... | ... | ... | 2 | ... | 4 | ... | ... | 4 | 11 |
| Rigby's Yard, Scholes..... | 1 | ... | ... | ... | ... | ... | ... | 2 | 1 | 1 | ... | ... | 1 | 5 |
| Russell Street ... | 1 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | 2 |
| Regent Street ... | 2 | ... | ... | ... | ... | ... | 1 | 3 | 2 | ... | ... | ... | 2 | 8 |
| Rupert Street ... | 4 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | ... | 2 |
| Riley's Yard, Queen Street.. | 5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Rylands Street.. | 8 | .. | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 2 | 3 |
| Ratcliffe Street.. | 8 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 1 |
| Rainford's Bldgs | 9 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 2 |
| Richmond Street | 10 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Ship Yard, Millgate..... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 2 |
| Scholes ..... | 1 | ... | ... | ... | ... | 1 | ... | ... | ... | 1 | ... | ... | 5 | 7 |
| School Lane..... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| School Street ... | 1 | ... | ... | ... | ... | 1 | ... | 2 | 1 | 3 | ... | ... | 4 | 11 |
| Standishgate..... | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 |
| St. George's Ter. | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Scholes ..... | 2 | ... | ... | ... | ... | .. | ... | ... | ... | ... | ... | ... | 3 | 3 |
| Salmon Street ... | 3 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 2 |
| Seed Street..... | 3 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Scholes ..... | 3 | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | 2 | 4 |
| Stanley Street... | 3 | ... | ... | ... | ... | ... | 2 | ... | ... | 3 | ... | ... | 4 | 9 |
| Schofield Lane... | 3 | ... | ... | ... | ... | ... | ... | 2 | ... | 1 | ... | ... | 4 | 7 |
| Swift's Square... | 3 | .. | ... | ... | ... | ... | .. | 1 | ... | 2 | ... | ... | 1 | 4 |
| Schofield Lane... | 4 | ... | 1 | .. | ... | ... | ... | ... | 1 | 3 | ... | ... | 5 | 10 |
| St. PatrickStreet | 4 | ... | .. | ... | ... | ... | ... | 2 | ... | ... | ... | ... | 2 | 4 |
| Stuart Street ... | 4 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Spring Street ... | 4 | ... | .. | ... | ... | ... | ... | 1 | 1 | 4 | ... | ... | 4 | 10 |
| Spring Grove .... | 4 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Silver Street..... | 4 | ... | ... | .. | ... | ... | ... | 2 | 1 | 1 | ... | .. | 6 | 10 |
| Sovereign Road . | 4 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | 2 |
| St. Thomas St... | 5 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 |
| Seven Stars Rd.. | 6 | ... | ... | ... | ... | ... | ... | ... | .. | ... | ... | 1 | ... | 1 |
| Sharp Street ... | 7 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 4 | 5 |
| Snape Street..... | 7 | ... | ... | .. | .. | ... | ... | 1 | .. | 2 | ... | ... | ... | 3 |
| Swann Street ... | 7 | ... | ... | ... | ... | .. | ... | ... | 1 | 1 | ... | ... | 3 | 5 |
| Stratford Street. | 8 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 2 |
| Springfield Road | 8 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Stopforth Street. | 8 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 2 |
| Swinley Road ... | 9 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | .. | 1 | 2 |
| Swinley Street... | 9 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 3 | 4 |
| Swinley Lane ... | 9 | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | 1 | 3 |
| Standishgate..... | 9 | ... | ... | ... | ... | ... | ... | ... | . | 1 | ... | ... | ... | 1 |
| Shaw Street ..... | 9 | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | ... | ... | 3 | 5 |
| Scarisbrick St.... | 9 | ... | ... | ... | ... | ... | ... | 1 | ... | .. | ... | ... | 2 | 3 |
| Smithy Yard, Wigan Lane... | 9 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Springfield St.... | 9 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| St. Ann's Square | 9 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 2 |
| Sterling Street... | 9 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 1 |
| Shelmerdine St.. | 10 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 |
| Standishgate..... | 10 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 |
| Spring Gardens.. | 10 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |

| Street. | Ward. | Small-pox. | Scarlet. | Enteric. | Typhus. | Diphtheria. | Whoop. Cough. | Measles. | Diarrhœa. | Pulmonary. | Rheumatism. | Cancer. | Others. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Shaw's Yard, Hallgate | 10 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 2 | 3 |
| Turner Street | 2 | ... | 1 | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 6 | 9 |
| Tichborne Street | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Thompson Street | 2 | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 2 |
| Teck Street | 4 | ... | ... | ... | ... | ... | .. | ... | ... | 1 | ... | ... | 1 | 2 |
| Taylor Street, | 7 | ... | | ... | ... | .. | ... | ... | ... | ... | .. | ... | 1 | 1 |
| Throstle N'st Av. | 8 | ... | ... | ... | ... | . | ... | ... | .. | ... | ... | ... | 1 | 1 |
| Third Avenue | 8 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Upper Morris St. | 1 | ... | ... | ... | ... | ... | ... | 1 | ... | 5 | .. | ... | 7 | 13 |
| Union Street. | 4 | ... | ... | ... | ... | ... | ... | ... | ... | ... | .. | ... | 4 | 4 |
| Union Workh'se | 8 | ... | ... | 1 | ... | ... | ... | ... | ... | 21 | .. | 2 | 50 | 74 |
| Upper St. Stephen Street | 8 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 |
| Upper Diccons'n Street | 9 | ... | .. | ... | ... | 1 | ... | ... | ... | 2 | ... | ... | 5 | 8 |
| Vaughan Street. | 2 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | . | ... | 3 | 4 |
| Vine Street. | 2 | ... | ... | .. | .. | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Vauxhall Road., | 4 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 2 |
| Vine Grove | 5 | .. | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 2 |
| Victoria Street. | 5 | ... | ... | ... | ... | ... | ... | 1 | 3 | 2 | ... | ... | 7 | 13 |
| Vere Street. | 7 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 2 | 4 |
| Vitriol Fold | 8 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 2 | 3 |
| Withnail Street. | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Worsley's Yard. | 1 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 2 |
| Water Heyes Rd. Terrace | 2 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 1 | 2 |
| Westminster St. | 2 | .. | ... | .. | ... | ... | ... | 1 | ... | 1 | ... | ... | 1 | 3 |
| Windsor Street. | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Weston Street.. | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Whelley | 2 | ... | ... | ... | ... | 1 | ... | ... | 1 | 2 | ... | ... | 2 | 6 |
| Wright Street. | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 2 |
| Wallace Lane | 2 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Whelley | 3 | ... | ... | ... | ... | 1 | ... | 1 | ... | ... | ... | ... | 3 | 5 |
| William Street. | 3 | .. | ... | 1 | ... | ... | ... | 1 | ... | 1 | ... | ... | 1 | 4 |
| Windermere St. | 3 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Well Street | 3 | ... | .. | ... | ... | ... | ... | ... | ... | 2 | ... | ... | 3 | 6 |
| Wellington St. | 4 | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | 1 | 3 |
| Warrington Lne | 4 | ... | ... | ... | ... | ... | 1 | 1 | ... | 2 | ... | ... | 7 | 11 |
| Wallgate | 5 | ... | 1 | ... | ... | ... | ... | ... | ... | 1 | ... | ... | .. | 2 |
| Worthington's Yard | 5 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Woods Street | 5 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 |
| Woods' Grove | 5 | ... | ... | .. | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Wood Street | 5 | ... | ... | ... | ... | ... | 1 | ... | ... | 2 | ... | ... | ... | 3 |
| Wood Yard | 5 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | ... | 1 |
| Wood Yard, James Street. | 5 | ... | ... | ... | ... | ... | ... | 2 | ... | ... | ... | ... | ... | 2 |
| Wallgate | 6 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | 3 | 4 |
| Wignall Street | 6 | ... | .. | ... | ... | ... | ... | ... | ... | 1 | ... | ... | .. | 1 |
| Walmer Street. | 6 | ... | ... | ... | .. | ... | ... | 1 | 1 | 1 | ... | ... | 3 | 6 |
| Westwood Road | 6 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | .. | 1 |
| Wilcock Street. | 7 | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | 1 | 3 |
| Wallgate | 7 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 4 | 5 |
| Waddington's Buildings | 7 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Walker's Yard., | 7 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Woodhouse Lne. | 8 | ... | 1 | ... | ... | ... | ... | ... | ... | 2 | ... | ... | 17 | 20 |
| Wrightington St | 9 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 2 |
| Wigan Lane | 9 | ... | ... | 1 | ... | ... | ... | 2 | ... | 3 | ... | 1 | 10 | 17 |
| Woods' Yard, Duke Street. | 9 | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | 2 |
| Worsley Terrace | 9 | ... | ... | ... | . | ... | ... | ... | ... | 1 | ... | ... | 1 | 2 |
| Wallgate | 10 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 2 |
| Yates Street | 7 | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 |
| York Street | 7 | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | ... | 1 | 3 |
| York Street East | 7 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Whiteside Avenue | 8 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Zulu Street | 4 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |



PART II.

# THE ZYMOTIC DISEASES.

# CONSTITUTIONAL DISEASES.

# LOCAL DISEASES.

# INQUESTS.

# CAUSES OF DEATH.

## THE ZYMOTIC DISEASES.

The Mortality from the principal zymotic diseases, namely, Small Pox, Scarlet Fever, Measles, Whooping Cough, Typhus, Enteric Fever, Puerperal Fever, Diphtheria, and Diarrhœa, gives us a rate of 4·18 per 1,000 of the population, against 3·27 in 1902.

The deaths numbered 264.

The zymotic rate 4·18 is made up as follows :—

Deaths per 1,000.

| | 1903. | 1902. |
|---|---|---|
| Small Pox | ·016 | ... |
| Scarlet Fever | ·41 | ·53 |
| Measles | 1·86 | ·32 |
| Whooping Cough | ·44 | ·60 |
| Typhus | ... | ... |
| Enteric | ·17 | ·22 |
| Diphtheria | ·2 | ·38 |
| Diarrhœa | 1·24 | ·92 |
| Puerperal | ·016 | ·16 |
| Erysipelas | ·03 | ·11 |

The zymotic rate during each of the four quarters was :—

| | 1903. | 1902. |
|---|---|---|
| 1st Quarter | 4·68 | 1·56 |
| 2nd „ | 5·05 | 2·98 |
| 3rd „ | 4·73 | 5·10 |
| 4th „ | 2·28 | 3·46 |

### Table of Zymotic Diseases.

| | Notified. | Died. | Case Mortality per cent. |
|---|---|---|---|
| Small Pox | 66 | 1 | 1·51 |
| Scarlet Fever | 362 | 26 | 7·18 |
| Enteric Fever | 51 | 11 | 21·56 |
| Diphtheria | 38 | 13 | 34·2 |
| Measles | 1456 | 104 | 7.24 |
| Whooping Cough | ... | 28 | ... |
| Diarrhœa | ... | 78 | ... |
| Puerperal Fever | 5 | 1 | 20·0 |
| Erysipelas | 51 | 2 | 3·92 |

## Death Rates, 1903.

| Disease. | No. of Deaths. | Rate. | |
|---|---|---|---|
| Small Pox | 1 | ·016 | |
| Measles | 104 | 1·86 | |
| Scarlet Fever | 26 | ·41 | |
| Diphtheria and Croup | 13 | ·2 | |
| Whooping Cough | 28 | ·44 | |
| Enteric Fever | 11 | ·17 | |
| Erysipelas | 2 | ·03 | |
| Septicæmia | ... | ... | |
| Puerperal Fever | 1 | ·016 | |
| Diarrhœa | 78 | 1·24 | |
| Phthisis | 74 | 1·1 | |
| Other Tubercular Diseases | 19 | ·3 | |
| Bronchial Diseases | 141 | 2·25 | 5·29 |
| Pulmonary Diseases | 190 | 3·04 | |
| Wasting Diseases of Infants | 53 | ·84 | |
| Convulsive „ „ | 34 | ·56 | |
| Cancer | 32 | ·51 | |
| Rheumatism | 7 | ·11 | |
| Diseases of Heart | 60 | ·96 | |
| Other Diseases | 485 | 7·77 | |
| Total | 1359 | 21·69 | |

## Number of notifications compared with other years :—

| Disease. | 1893 | 1894 | 1895 | 1896 | 1897 | 1898 | 1899 | 1900 | 1901 | 1902 | 1903 |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Small Pox | 13 | 2 | 91 | 33 | 0 | 0 | 0 | 0 | 0 | 4 | 66 |
| Typhus | 20 | 34 | 33 | 20 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Scarlet | 335 | 359 | 161 | 151 | 191 | 420 | 245 | 484 | 264 | 557 | 362 |
| Enteric | 264 | 68 | 64 | 101 | 64 | 93 | 173 | 104 | 71 | 76 | 51 |
| Continued | 71 | 32 | 29 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Diphtheria | 16 | 10 | 13 | 10 | 23 | 12 | 13 | 20 | 49 | 58 | 38 |
| Puerperal | 10 | 7 | 5 | 7 | 7 | 4 | 4 | 4 | 8 | 10 | 5 |
| Cholera | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |
| Erysipelas | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 39 | 65 | 65 | 51 |
| Mem. Croup | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 |
| Total | 729 | 512 | 396 | 324 | 287 | 529 | 435 | 651 | 457 | 772 | 573 |

## Analysis of Notifications :—

| 1903. | Jan. | Feb. | Mar | Apl. | May | Jun | July | Aug | Sep. | Oct. | Nov | Dec. | T'tal |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Small Pox | 16 | 15 | 9 | 15 | 3 | 2 | 1 | 1 | ... | 3 | 1 | ... | 66 |
| Scarlet | 50 | 19 | 31 | 35 | 39 | 30 | 19 | 21 | 26 | 29 | 24 | 39 | 362 |
| Typhus | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Enteric | 7 | 2 | 6 | 10 | 4 | 3 | 2 | 1 | 4 | 5 | 2 | 5 | 51 |
| Continued | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Diphtheria | 8 | 2 | 4 | 4 | 2 | 4 | 5 | 2 | ... | 3 | 1 | 3 | 38 |
| Puerperal | ... | ... | ... | 1 | 1 | ... | ... | ... | ... | ... | 1 | 2 | 5 |
| Cholera | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Erysipelas | 5 | 6 | 3 | 8 | 2 | 4 | ... | 1 | 5 | 5 | 5 | 7 | 51 |
| Total | 86 | 44 | 53 | 73 | 51 | 43 | 27 | 26 | 35 | 45 | 34 | 56 | 573 |

# SMALL POX.

In my last Annual Report (1902) I stated on page 16 : "I regret that Small Pox has again appeared in our County Borough, after an absence of six years and a half." In the same report I detailed how the cases were found in a common lodging-house, and also mentioned the steps we had taken to prevent it spreading, and in this report you will find the particulars of the epidemic. The first cases occurred, as will be seen from the above-mentioned report, on December 26th, 1902, and continued till November 27th, 1903, when the last case was discharged from the Decker Hospital.

We also had to treat seven cases from Aspull. All the Aspull cases recovered, and we only had one death amongst the Wigan cases, and this in an unvaccinated female, aged 50 years.

The following is a list of the cases, with the source of infection as far as could be traced.

## Small Pox Outbreak, 1902-1903.

1st case. December 26th, 1902. M B., female, age 26 years, removed from a common lodging-house, No. 9, Union Street; had been in contact with a man who had stayed at the lodging-house, and who afterwards developed Small Pox and was isolated at Eccles. Not vaccinated. Recovered.

2nd case. December 26th, 1902. J. H. M., male, age 7 years, nephew of No. 1, removed from same place. same source of infection. Not vaccinated. Recovered. M. M., the mother of No. 2., was also removed from the same place on account of having been in contact ; her child C. M., 3 months old, was also removed, neither had been vaccinated ; they were then both vaccinated and placed in the ward with the others, and neither of them contracted the disease.

3rd case. December 29th, 1902. J. M., male, age 35 years, removed from same place and source of infection as No. 1 and 2. Vaccinated. Recovered.

4th case. December 29th, 1902. M. A. C., female, age 13 years, removed from same place and had same source of infection. Re-vaccinated 26th of December, 1902.

5th case. January 3rd, 1903. J. B., male, age 68 years, father of No. 1, removed from same house, contracted the disease from No. 1. Vaccinated. Recovered. This man had refused re-vaccination.

6th case. January 8th, 1903. D. C., male, age 34 years, removed from a common lodging-house, had been there a week, and came from Ormskirk, where he had resided in a lodging-house from which a case of Small Pox had been removed. Vaccinated. Recovered.

7th case. January 23rd, 1903. M. A. M., female, age 12 years, removed from Great George Street, had contracted the disease from a woman who resided in a yard behind, and who was under the impression that she herself was suffering from Chicken Pox; the source of infection of woman we were unable to trace. Unvaccinated. Confluent type. Recovered.

8th case. January 25th, 1903. S. A. W., female, age 29 years, removed from Great George Street; same source of infection as No. 7. Vaccinated. Recovered.

9th case. January 25th, 1903. M. C., female, age 28 years, removed from Delph Street; contracted the disease from same source as No. 7 and 8. Vaccinated. Recovered.

10th case. January 26th, 1903. N. C., female, age 26 years, removed from Caroline Street, same source of infection as Nos. 7, 8, and 9, had been in close contact with her sister-in-law, the person who was supposed to be suffering from Chicken Pox. Vaccinated. Recovered. Her baby, aged 8 months, had been recently vaccinated, and in consequence was admitted with her. It did not contract the disease.

11th case. January 27th, 1903. G. H., male, age 19 years, removed from Canal Street; he worked at the colliery where the husband and brother-in-law of No. 10 also worked; same source of infection. Vaccinated. Recovered.

12th case. January 27th, 1903. W. T. C., male, age 19 years, removed from Clayton Street, worked at the colliery with the husband of No. 10 and his brother. Vaccinated. Recovered.

13th case. January 27th, 1903. J. W., male, age 29 years, removed from the Sanitary Offices, resided at Great George Street, and was the husband of case No. 8. Vaccinated, and re-vaccinated after contact. Recovered.

14th case. January 28th, 1903. M. S., female, age 18 years, removed from Waddington's Yard, Great George Street ; had been in contact with case No. 7, and also with the woman who infected No. 7. Vaccinated and re-vaccinated after contact. Recovered.

15th case. January 29th, 1903. E. B. P., male, age 12 years, removed from Driving Lane, attended St. Thomas's Schools, and had been in the habit of playing with his school friend in Great George Street ; probable source of infection No. 7. Vaccinated. Recovered.

16th case. January 29th, 1903. E. L., female, age 26 years, removed from Dobb's Fold, had removed from Great George Street two days before the eruption broke out on her ; same source of infection as 7 to 14. Vaccinated. Recovered.

17th case. January 29th, 1903. E. D., female, aged 35 years, removed from Great George Street. Her husband kept a butcher's shop, in which she served. Nos. 8 and 14 were customers of hers. She had most probably contracted the disease from them. Vaccinated. Recovered.

18th case. January 29th, 1903. A. W., female, aged 43 years, removed from a public-house in Lyon Street, where she resided. The husband of No. 10 and his brother were regular customers. Vaccinated. Recovered.

19th case. January 29th, 1903. T. G., male, aged 41 years, removed from York Street East. Was a customer at the public-house mentioned in case No. 18, and a friend of the husband of No. 10. Not vaccinated. Recovered.

20th case. January 30th, 1903. E. F., female, aged 65 years, removed from Great George Street; was the grandmother of case No. 7, from whom she contracted the disease. Vaccinated and re-vaccinated January 24th, 1903, after contact. Recovered.

21st case. February 2nd, 1903. T. L., male, aged 12 years, removed from Walker's Yard, Lyon Street; was a scholar at St. Joseph's Schools, and was in the habit of playing about in the neighbourhood of the public-house mentioned in case 18. Probable source of infection the same as No. 18. Vaccinated. Recovered.

22nd case. February 2nd, 1903. M. J. P., female, age 33 years, removed from Gerard Street, Poolstock. Could not trace source of infection. Vaccinated. Recovered.

23rd case. February 4th, 1903. T. S.. male, age 12 years, removed from St. Thomas's Schools, where he was a half-time scholar. He resided in Poolstock. Source of infection could not be traced, though he worked in same room as No. 14. Vaccinated. Recovered.

24th case. February 10th, 1903. T. P., male, age 53 years, removed from Driving Lane, father of case No, 15. Vaccinated and re-vaccinated February 2nd, 1903, after contact.

25th case. February 10th, 1903. C. P., female, age 55 years, mother of case No. 15. Vaccinated and re-vaccinated on February 2nd, 1903. Recovered.

26th case. February 10th, 1903. M. J. P., female age 15 years, sister of No. 15. Vaccinated and re-vaccinated February 2nd, 1903. Recovered.

27th case. February 11th, 1903. E. W., female, age 30 years, removed from Great George Street, was a visitor at the house of No. 18, where she (in all probability) caught the disease. Vaccinated. Recovered.

28th case. February 13th, 1903. W. H. P., male, age 30 years, removed from Driving Lane, brother of case No. 15, from whom he contracted the disease. Vaccinated. Recovered.

29th case. February 14th, 1903. E. W., female, age 34 years, removed from Greenough Street. Source of infection could not be traced. Vaccinated. Recovered.

30th case. February 15th. 1903. W. W., male, age 21 years, removed from Great George Street. Direct source of infection could not be traced. He was a cab-

driver, and probably contracted the disease from No. 18, at which house he was a customer. Vaccinated. Recovered.

31st case. February 16th, 1903. A. S., male, age six years, removed from front part of house in Driving Lane, from which cases 15, 24, 25, and 26 had been removed. Not vaccinated. Recovered.

32nd case. February 17th, 1903. S. J. R., female, age 60 years, removed from Great George Street, was the mother of case No. 27, from whom she had contracted the disease. Vaccinated. Recovered.

33rd case. February 19th, 1903. T. R., male, age 18 years, removed from Woodhouse Lane, worked at the Wigan Rolling Mills. Source of infection could not be ascertained. Vaccinated. Recovered.

34th case. February 27th, 1903. S. J. S., age 1 month, removed from Scholes; the father worked at Walker's Foundry, and it was ascertained he had been ill and had had a rash on him a fortnight previously; traces of the pustules could be seen. Not vaccinated. Recovered. Mother was re-vaccinated and admitted with child, and did not contract the disease.

35th case. March 2nd, 1903. J. S., age 23 years, brother of the father of No. 34, removed from Schofield Lane, also worked at Walker's Foundry, same source of infection as No. 34. Vaccinated. Recovered.

36th case. March 2nd, 1903. E. S., female, age 35 years, removed from front part of house in Driving Lane; mother of No. 31, from whom she caught the disease. Vaccinated. Recovered.

37th case. March 9th, 1903. P. B., age 40 years, removed from Great George Street, worked at Worsley Mesnes Collieries; source of the disease not ascertained. Vaccinated. Recovered.

38th case. March 14th, 1903. E. S., 29 years of age; female, sister of No. 35, from whom she probably caught the disease. Vaccinated, and re-vaccinated on March 6th, 1903. Recovered.

39th case. March 14th, 1903. H. B., age 35 years, male, removed from Darlington Street; was a milk

dealer with a very large round ; source could not be traced, but probably from handling coppers and wetting fingers whilst counting them. Vaccinated. Recovered.

40th case. March 17th, 1903. T. H., age 58 years, male, was removed from Dr. Bradbury's surgery, where he had gone whilst suffering from the disease; resided at a common lodging-house in Hardybutts ; he was a brickmaker working at Park Lane Brickcroft ; source of the disease could not be ascertained. Vaccinated. Recovered.

41st case. March 23rd, 1903. P. M., age 35 years, male, removed from a common lodging-house in Hallgate ; worked at Orrell with a threshing machine ; source of infection could not be ascertained, although there had been one or two cases in Orrell. Vaccinated. Recovered.

42nd case. March 28th, 1903. T. C., age 38 years, male, removed from Holme Street, worked at a Drapery Stores in Standishgate ; could not trace source of disease. Vaccinated. Recovered.

43rd case, March 31st, 1903. J. P., age 25 years, female, removed from Warrington Lane, employed at same place as No. 42 ; probably same source of infection. Vaccinated. Recovered.

44th case. April 1st, 1903. A. S., age 50 years, female, removed from common lodging-house in Wiend ; had been in the town 9 days, and had come from a common lodging-house in Haslingden where a case of Small Pox had occurred three days before she left. Vaccinated. Recovered.

45th case. April 4th, 1903. G. P., age 30 years, female, removed from Florence Street. A fortnight before her husband had been reported as suffering from the disease, but on examination no trace could be found on him ; he was a cabdriver. G.P. said she had been covered all over with a rash, but when the doctor came the rash had disappeared. Vaccinated. Recovered.

46th case. April 1st, 1903. T. G., age 25 years, male, removed from common lodging-house in Hardybutts ; same infection as No. 41. Vaccinated. Recovered.

47th case. April 4th, 1903. J. G., age 31 years, male, removed from common lodging-house in Hardybutts ; infected by No. 40. Not vaccinated. Recovered.

48th case. April 7th, 1903. A. R., age 5 years, female, removed from Waddington's Buildings, Clayton Street; the father worked at same colliery as No. 37, and had been off his work with a rash on him a fortnight before. Not vaccinated. Recovered.

49th case. April 7th, 1903. M. M., age 30 years. female, removed from same place, and was a lodger in the house. Vaccinated. Recovered.

50th case. April 8th, 1903. M. F. age 3 months, female, sister of No. 48, removed from same place. Not vaccinated. Recovered.

51st case. April 7th, 1903. M. R., age 33 years, male, removed from Waddington's Buildings, worked with the father of No. 49 at the collieries; probably same source of infection as No. 49. Vaccinated. Recovered.

52nd case. April 16th, 1903. J. S., age 8 years, male, removed from Brookhouse Street; had been staying at Oldham for three weeks previously and in the same street from which cases of Small Pox had been removed. Not vaccinated. Recovered.

53rd case. April 17th, 1903. J. H., age 27 years, male, removed from No. 1, Cecil Street, was the brother of No. 45, and had been to see her whilst she was ill; source of infection No. 45. Vaccinated. Recovered.

54th case. April 17th, 1903. E. A. H., age 22 years, female, cousin of No. 45; same source of infection as No. 53. Vaccinated. Recovered.

55th case. April 17th, 1903. J. H., age 51 years, female, aunt of No. 45, removed from 7, Clare Street; had been to see No. 45 when she was ill, and contracted the disease from her. Not vaccinated. Died.

56th case. April 18th, 1903. S. A. M., age 31, female, removed from New Square; source of infection could not be ascertained, though her younger brother had been suffering from what was reported as severe Chicken Pox at the time. Vaccinated. Recovered.

57th case. April 27th, 1903. P. C., age 30 years, female, removed from Springfield Road, worked at Tipping Street Mill (Brown's); she caught the disease

from a girl named Hartley, who worked beside her, and who had been removed to the Small Pox Hospital in Ince. Vaccinated. Recovered.

58th case. April 28th, 1903. W. S., age 20 years, male, removed from Wallace Lane, worked at Top Place coke ovens with No. 47 ; the only source that could be traced was No. 47. Vaccinated. Recovered.

59th case. May 2nd, 1903. J. E., aged 18 years, male, removed from a Common Lodging House in Union Street, but had been residing at Lamberhead Green, Pemberton, for some weeks previously at a house from which Small-pox patients had been removed. Not vaccinated. Recovered.

60th case. May 11th, 1902. S. C., age 36 years, female, removed from York Street; had been working at Brown's Tipping Street Mill, with No. 57, from whom she had probably caught the infection. Vaccinated. Recovered.

61st case. May 15th, 1903. J. G., age 34 years, male, removed from Baron Street, was a guard in the employ of the G. C. Railway. Source of infection could not be traced. Vaccinated. Recovered.

62nd case. June 27th, 1903. R. D., age 20 years, male, removed from a Common Lodging House, in John Street, but of no settled abode. Source of infection could not be traced. Vaccinated. Recovered.

63rd case. June 28th, 1903. S. I., age 41 years, male, removed from Gidlow Lane, says that a fortnight previous to his removal he was travelling to Preston, and there was a man in the same compartment with him with a lot of these spots on him, but he (patient) did not know it was Small-pox. Vaccinated. Recovered.

64th case. July 11th, 1903. M. M., age 28 years, male, removed from John Street. He contracted the disease from No. 32. Vaccinated. Recovered.

65th case. August 28th, 1903. J. A. G., age 51 years, female, removed from Rylands Street. Source of infection could not be traced. Vaccinated. Recovered.

66th case. October 6th, 1903. A. C., aged 27 years, male, removed from the Union Workhouse, belonged to Hindley. Had been tramping the country, and had

probably contracted the disease in Liverpool, where he had been stopping. Vaccinated. Recovered.

67th case. October 19th, 1903. H. J., age 45 years, male, removed from Pitt Street. Contracted the disease from a relative at Fleetwood, who was supposed to be suffering from Chicken-pox. Vaccinated. Recovered.

68th case. October 26th, 1903. D. C., age 30, male, removed from Wood's Yard, Wood Street. Source of infection could not be traced. Vaccinated. Recovered.

69th case. November 1st, 1903. M. J. H., age 38 years, female, removed from Caroline Street. Source of infection could not be ascertained; her husband, who was a painter, cleaned the house of No. 67. Vaccinated. Recovered.

We had 69 cases in a population of 62,689; in Oldham, where the compulsory powers of the Vaccination Act had not been put in force for 15 years, they had 400 cases in a populatian of 137,000. At the same rate, if vaccination had no efficacy we should have had 183 cases.

We have a record kept of the cases, according to the form prescribed by the Local Government Board, and from this record I have abstracted the following results as to vaccination, showing also the average length of stay in hospital, so that vaccination not only protects a person from the disease, but if the protection is wearing out it minimises the severity of the disease, and this is in accordance with the efficiency or otherwise of the vaccination.

TABLE OF CASES OF SMALL POX SHOWING NUMBER OF THE MARKS OF VACCINATION PERFORMED IN INFANCY.

| Vaccination Marks | 4 | 3 | 2 | 1 | 0 |
|---|---|---|---|---|---|
| Number of Cases | 7 | 21 | 20 | 8 | 14 |
| Average Days in Hospital | 14·14 | 18·73 | 15·66 | 17·40 | 29·57 |

So that on economic grounds alone Vaccination reduces the cost per case. None of these cases had ever been re-vaccinated before contact.

## Total Cost of Small Pox Cases.

| | £ | s. | d. |
|---|---|---|---|
| Food for Patients | 105 | 9 | 2 |
| Stimulants | 9 | 10 | 1 |
| Medical Extras | 33 | 4 | 10 |
| John Farnon (Wages) | 33 | 0 | 0 |
| „ (Board) | 11 | 0 | 0 |
| Hire of Cabs | 10 | 9 | 0 |
| Disbursements by M.O.H., clothing, &c. | 39 | 16 | 0 |
| J. Kelly (Keep of Contacts) | 20 | 0 | 0 |
| Jane Willis (Keep of Contacts) | 7 | 10 | 0 |
| Salaries and Board for Two Nurses and One Servant for Nine Months | 113 | 5 | 0 |
| Gratuities to M.O.H. and staff | 100 | 0 | 0 |
| | 483 | 4 | 0 |
| Less Amount paid by Aspull | 73 | 16 | 0 |
| Total cost for Wigan | £409 | 8 | 0 |

## Vaccination Returns, 1902—1903.

The following Vaccination Returns have been supplied to me by the Vaccination Officer, Mr. R. Halliwell, J.P. :—

| | Jan. to June, 1903. | The whole of 1902. |
|---|---|---|
| Births Registered | 1114 | 2334 |
| Successfully Vaccinated | 873 | 1855 |
| Insusceptible | 5 | 3 |
| Exemptions, section 2, 1899 | 6 | 17 |
| Died Unvaccinated | 131 | 324 |
| Postponed by Certificates | 15 | 9 |
| Left Town and Reported to others | 12 | 15 |
| Remainder cannot Trace | 21 | 52 |
| Refusals, and not Accounted for | 51 | 59 |
| Total Number of Successful Vaccinations, all ages, in 1902 | | 2334 |
| „ „ „ 1903 | | 2119 |
| Deaths of Infants under 12 months in 1902 | | 368 |
| „ „ 1903 | | 399 |

I wish here to give a few extracts showing the efficacy of vaccination, and the necessity for re-vaccination.

## VACCINATION AND SMALL POX IN NORTHAMPTON.

Sir,—An outbreak of Small Pox has recently occurred in Northampton, and as there are a great number of unvaccinated children in this town the following facts may be of interest.

It is to be noted that the "contacts" were kept away from work or school for 18 days after the removal of the

last case from a house, and in the case of wage earners the wages were paid to them. Isolation of these contacts was not carried out in special buildings, but in their own homes, certain instructions being given to them as regards exercise, which on the whole were faithfully carried out.

| Vaccination Facts. | Mild. | Medium. | Severe. |
|---|---|---|---|
| Vaccination before the date of infection ..... | 16 | 5 | 2* |
| Unvaccinated at date of infection ..... | 2 | 4 | 8 |

*One, aged 70, no marks, the other, aged 42, intemperate.

Contacts.—Total contacts kept under supervision, 153. Small Pox occurred in 15 of these, equivalent to 9·8 per cent. Of these there were unvaccinated at the date of the notification of the case, 42; vaccinated, 3.

The 42 unvaccinated contacts furnished 7 cases, equal 16·6 per cent.; 3 vaccinated contacts furnished 8 cases, equal 7·2 per cent.

In no case did Small Pox develop where vaccination was carried out within four days after the onset of the disease in the primary case. This was true of 12 contacts.

On the other hand, while the 30 remaining unvaccinated contacts furnished 7 cases, 23, although vaccinated at later dates (varying from 5 to 2 days after the onset of the disease in the primary case) escaped.

Classification of the contacts into three age periods, 1 to 12, 13 to 20, and over 21 :—

| | | Per cent. |
|---|---|---|
| 1 to 12 | 6 vaccinated contacts, no cases occurred... ... ... | 0·0 |
| | 36 unvaccinated, 7 cases occurred ... ... ... | 19·4 |
| 13 to 20 | 28 vaccinated (in infancy), 1 case occurred ... ... (This case had three pocks altogether). | 3·5 |
| | 5 unvaccinated, no case occurred ... ... ... ... | 0·0 |
| 21 and over. | 77 vaccinated (in infancy or early life), 7 cases occurred | 9·0 |
| | 1 unvaccinated (age 22, vaccinated 5 days after the onset of the disease in the primary case), no case occurred | 0·0 |

I am, etc.,

James Beatty, M.D., M.O.H.

Northampton, June 9th.

("British Medical Journal," June 13, 1903.)

At the meeting of the British Medical Association held in Swansea July 28th, 29th, 30th, and 31st, 1903, a discussion took place on the Vaccination Acts and the Prevention of Small Pox.

J. C. McVail, M.D., F.R.S.E., stated : " We are still therefore in the position of discussing not what the law is, but what it ought to be. And first of all I want to say a word on the subject of our attitude to all such questions. Medical men have no final responsibility for the action or inaction of Government regarding vaccine legislation. It is our duty to advise, and not to weary of keeping the subject before Parliament and the public. We have much less occasion than the public to worry over any parliamentary delay or hesitation in giving effect to our advice. The value of vaccination as a preventive of Small Pox is not for us a matter of opinion. It is a matter of knowledge. We know that vaccination and re-vaccination prevent Small Pox, and there is no reason whatever to suppose that Small Pox can be stamped out of Britain without vaccination and re-vaccination. If Parliament desires to achieve the end it must use the means. Our advice will be justified alike in its acceptance and in its rejection. Acceptance will in due time rid the country of Small Pox epidemics. Rejection will continue to be accompanied by its own punishment. Small Pox is after all one of the most interesting of infectious diseases, and if the Legislature persists in providing opportunities to study it, we must just make the best of the situation. Fortunately, protected by vaccination and re-vaccination, its study is unaccompanied by the slightest risk to ourselves and our families, while all other people who choose can obtain for themselves the immunity which the prophylactic is capable of affording. Once in a while, to make assurance trebly sure, the presence of epidemics may cause a repetition of the protective operation which otherwise would not be thought of, and, so far as personal security against Small Pox is concerned, that is all the trouble that national neglect of vaccination need cost any member of the medical profession."

C. R. Drysdale, M.D., M.R.C.P., F.R.C.S., London, stated that the profession in the United Kingdom must have felt greatly humiliated by seeing so many epidemics

of Small Pox (such as those in Gloucester, London, etc.), whilst in Germany, since 1875, epidemics of Small Pox had been unheard of, because vaccination was enforced on all infants and on all children before the age of twelve years. Most young practitioners in Germany had never experienced an outbreak of Small Pox. Dr. Drysdale concluded his remarks by proposing the following resolution, which was seconded by Dr. H. H. Tidswell: "Considering that, of late years, there have occurred in cities of the United Kingdom several epidemics of Small Pox, whilst in Germany since the year 1875 such epidemics have been unheard of, on account of the fact that all children under two years old are under a law of compulsory primary vaccination, and all the population under a law of compulsory re-vaccination, and that all vaccinations are done with animal vaccine—this meeting is of opinion that all children in the United Kingdom should be vaccinated in infancy and re-vaccinated at the age of 10 or 12 years, and that animal vaccine alone should be made use of. If this plan were thoroughly carried out this meeting is of opinion that epidemics of Small Pox would no longer occur in this kingdom."

("British Medical Journal," August 8th, 1903. Pages 289, 290, 291.)

## SMALL POX AT WORK.

In a recent issue the "Yorkshire Herald" gives one or two examples of the doings of Small Pox in York—examples which can be abundantly paralleled wherever Small Pox prevails. A case occurred in a house in Tower Street, and the patient was removed to hospital. Nine inhabitants remained, of whom six were re-vaccinated and three were not—a grandmother, her daughter, and a grandchild. The daughter was removed to hospital eighteen days later, suffering from Small Pox, and the child a week afterwards. The latter died. At the commencement of the outbreak at York Workhouse three men were removed to the Small Pox Hospital, and 21 remained. Twenty of these accepted re-vaccination, but the twenty-first refused. In fifteen days he was found to be suffering from Small Pox, and was taken to hospital, where, after two days, he died. From a lodg-

ing-house, in Skeldergate, three cases of Small Pox were removed to hospital in October. Seventeen inmates were re-vaccinated, and seven refused. The 17 have remained free from infection but nearly all the seven have been attacked. To everyone acquainted with the doings of Small Pox, these occurrences are the mere commonplaces of experience, but to people who have to take their information second-hand, and who, from the amount of noisy vituperation that they hear against vaccination, may have loosely come to the conclusion that there are two sides to the question, such illustrations of how Small Pox differentiates between the unvaccinated, the once vaccinated, and the re-vaccinated, must be very striking, and it is not surprising to hear that in York many parents have discarded their conscientious objections, and have submitted their children to vaccination. As has often been said before, there is no schoolmaster like Small Pox, but education so provided has to be paid for at a terrible price.

("The British Medical Journal," February 6th, 1904. Page 328.)

### An Extract Showing How Infection is Easily Spread in Scarlet Fever, and also the Value of Vaccination.

In the Report of the Army Medical Department for 1900, which has just been issued as a Blue Book, a curious instance of the transport of infection for a long distance is recorded. It is stated that the health of the troops in Egypt was good, on the whole, but that an outbreak of scarlet fever occurred among the 3rd Battalion Seaforth Highlanders at Cairo during the latter portion of the year. This outbreak was attributed to parcels sent from localities in Scotland where the disease was rife. The Battalion was placed under canvas, and all parcels were disinfected, with satisfactory results.

Small Pox.—From the report of the Connecticut State Board of Health we quote the following :—

"One of the most notable facts relating to the health of the State during the past year was the widespread prevalence of Small Pox. Cases were reported from 34 different towns, including every county in the State."

"In only a few places did it assume the character of an epidemic, although regarded as the most contagious of all diseases."

"In two ways these outbreaks gave testimony to the protective power of vaccination (1) Connecticut, one of the most densely populated States, and in intimate relation with the rest of the country, was slow to entertain any cases of the disease. This exemption can be explained only because so large a proportion of the inhabitants have been rendered immune by vaccination."

"(2) The spread of the disease has been almost wholly among those who were never vaccinated, or who were vaccinated so long ago that its protective power had been impaired by time. In still another way its value has been verified by the prompt arrest of the spread of the disease wherever a general vaccination has been practised."

"There were 323 cases reported during the year ended October 1, of which only 22 were fatal, giving the surprisingly low death-rate of 6·8 per cent. In all the literature there is no record of an epidemic of so mild a type."

"In the three largest cities in the State, where general vaccination is observed, there were only 16 cases."

("Public Health," February, 1903, page 266).

THE ANNUAL REPORT OF THE METROPOLITAN ASYLUMS BOARD FOR 1902.

"British Medical Journal," August 20th, 1903, page 487.

## SMALL POX.

The statistics given in the report as to the recent Small Pox epidemic, although they reveal no new facts, strengthen the case for vaccination and re-vaccination. Of 9,659 Small Pox cases admitted during the years 1901-2, 6,945 were vaccinated, the fatality among whom was 7·3 per cent. In 436 cases vaccination was doubtful; the fatality was among these 39·2 per cent.; while 2,278 were unvaccinated, the fatality among these being 33·1 per cent.

During the epidemic there were, under ten years of age, only 134 vaccinated cases and two deaths; 33 doubtful cases, of whom six died; and 1,274 unvaccinated cases, of whom 442 died, a percentage of 34·6.

Under 20 years of age there were 1,297 vaccinated cases, of whom 25 died, a percentage of 1·9; 106 doubtful cases, of whom 21 died, a percentage of 19·8; and 1,893 unvaccinated cases, of whom 392 died, a percentage of 31·27.

The diminution after 20 years in the protective power afforded by infant vaccination is shown by the rise in the fatality rate from 4·7 in vaccinated cases between 20 and 25 years of age to 18·07 in cases between 35 and 40.

The contrast between the number of vaccinated and the number of unvaccinated children attacked is very striking, but is absolutely in accordance with all experience of epidemic Small Pox. It has already been pointed out that only 134 vaccinated children under 10 years of age were admitted, amongst whom the mortality was at the rate of 1·4 per cent. only. Of unvaccinated children under 10 years of age, 1,274 were admitted, amongst whom the mortality was at the rate of 34·7 per cent. Two hundred and seventy-six patients were stated to have been successfully re-vaccinated. In 93 cases the vaccination cicatrices afforded presumptive evidence of the operation having been performed. In all but five cases it had been performed upwards of 10 years previous to the attack of Small Pox; in 69 cases upwards of 15 years had elapsed. Of these 93 cases, 3 died; in one case re-vaccination had been performed 37 years, in one 36 years, and in the third case 24 years before the attack of Small Pox. In 47 cases the evidence of re-vaccination was uncertain, but capable of interpretation in the affirmative. Five of these cases died; two had been re-vaccinated 36 years before the attack of Small Pox, one 25 years, and one 23 years, and one 15 years before. In 136 cases the appearance of vaccination cicatrices afforded no evidences of the re-vaccination having been successfully performed; 19 of these cases died.

The following leading article appeared in the "Hospital" September 26th, 1903:—

## MRS. GARRETT ANDERSON ON SMALL POX.

Mrs. Garrett Anderson's contribution to the history of the London Small Pox epidemic of 1901-2 which appeared in the "Times" of the 15th inst. as a letter headed "Vaccination and the Rates," may well be regarded as a State paper of the first importance, deserving to be studied by all who can obtain access to it. The distinguished writer signed it in her capacity of honorary secretary to the Imperial Vaccination League; and it is therefore not unreasonable to hope that it may be issued as one of the League documents in a cheap and accessible form, and may thus be preserved from the oblivion which is apt speedily to overtake the most valuable communications to a daily paper. Mrs. Garrett Anderson takes as her text the recently issued report of the Metropolitan Asylums Board, and analyses its facts and figures, with especial reference to three points of supreme importance, namely, the protective influence of infant vaccination and the limits of its duration; the necessity for systematic re-vaccination at school age if epidemic Small Pox is to be prevented; and the cost to the ratepayers of the method now employed to prevent or control epidemics of Small Pox. It is proper to note that, in speaking of the enormous cost of the epidemic with which she deals, Mrs. Garrett Anderson disclaims any intention of criticising either the methods or the expenditure of the Asylums Board She declares that the board was given a gigantic task, and that there is no reason to think either that it failed in accomplishing it or that any other body of persons could have done better.

With reference to the first of the three questions mentioned above, the large figures dealt with by the report entirely confirm the belief that the protection afforded by infantile vaccination is at first practically complete, and that it gradually becomes exhausted during childhood and adolescence. In considering the figures of the report it is necessary to remember that vaccinated children greatly exceed the unvaccinated in number, and that both classes may be presumed to have been equally exposed to contagion. Excluding 33 children under 10, as to whom it could not be certainly

determined whether they had been vaccinated or not, the report shows that in 1901 there were no deaths among vaccinated children under 10, and 65 deaths among unvaccinated. Among people under 20 who had been vaccinated 264 took the disease, of whom 175 were over 15. Of this number two died and one child between 10 and 15, making three deaths in all. Among the unvaccinated during the same period there were 95 deaths under 20, and 65 under 10. In 1902 the numbers concerned were larger, and the result still more conspicuous. There were 337 deaths among the unvaccinated children under seven, and none among the vaccinated of the same age ; while, as life goes on, the difference between the two classes, although always great, becomes less marked as the protective influence diminishes. In Mrs. Garrett Anderson's words, the total number of cases of Small Pox varies in an imperfectly protected community with the amount of infection in each locality, but the proportion of deaths to cases varies with the degree of immunity still left to people vaccinated in infancy contrasted with the complete absence of immunity in unvaccinated people. In 1902 the percentage of deaths to cases between 15 and 20 was 2·6 in the vaccinated and 25 in the unvaccinated ; between 20 and 25 it was 4·3 in the vaccinated and 31·7 in the unvaccinated ; and between 25 and 30 it was 6·3 in the vaccinated and 41·2 in the unvaccinated. The great numerical majority of persons vaccinated in infancy whose protection had become so weakened as to leave them with no immunity from the disease, although with a greatly lessened liability to death, affords a sufficient explanation of the larger number of occurring cases among them than among the unvaccinated. We find that among the vaccinated under 30 there were 2,720 cases and 132 deaths, or 4·8 per cent., while among the unvaccinated there were 394 cases and 120 deaths, or 30·4 per cent It is evident that by systematic re-vaccination at some stated age, which might be conveniently made to coincide with the termination of school life, so as not to interfere with earnings, the whole population might be placed in the condition of comparative safety which now exists for vaccinated children of tender years. The protective influence of vaccination does not wear

out with the same rapidity after the age of childhood, with its rapid growth and active tissue changes, has passed away ; and assuming the original vaccination to have been satisfactory and complete, and to have produced at least four well-formed vesicles, there is every reason to believe that a single re-vaccination would afford complete protection for the whole of life, except, possibly, in a few individuals of special liability who, even if they contracted the disease, would he harmless in a protected community. That this is so is sufficiently shown by the example of Germany, where re-vaccination is enforced by law. Germany is in direct contact with other countries in which Small Pox is permitted to exist, more especially with Russia, where there were close upon 33,000 deaths from the disease in 1901. In the whole of Germany in the same year there were 375 cases, with 54 deaths, 31 of these being in unvaccinated persons. The cases were distributed over 157 localities, mostly on the borders of Russia or Austria, and in no single instance did they lead to any local epidemic prevalence. We have left ourselves no space in which to deal with the financial aspects of the question, to which we shall hope to return hereafter.

## THE ANTI-VACCINISTS' LAST DITCH.

The Liverpool Anti-vaccination League has issued a leaflet in criticism of a statement recently made by Dr. Hope regarding the value of vaccination during the outbreak in Liverpool.

Dr. Hope stated that during the last six months 71 children below five years old were attacked by Small Pox, and that of these 66 were unvaccinated, while the remaining five had been vaccinated very imperfectly. These five had a mild attack and recovered, while in the unvaccinated cases the illness was very severe, and there was a fatality rate of 30 per cent.

During the last five years the fatality rate among the vaccinated was 2 per cent , and among the unvaccinated 37 per cent. Within the last 18 months there have been 80,000 re-vaccinations, and from among this large population not a single case of Small Pox has been admitted to hospital.

It is not surprising that the local anti-vaccinists should have been anxious to diminish the effect of these very striking figures. They stated that it has been frequently pointed out by anti-vaccinist writers that in a well vaccinated city like Liverpool the unvaccinated class includes all the children, whose vaccination has been postponed on account of ill-health, and that the majority of children who escape vaccination are found in the poorest and most insanitary districts of the city. It is quite true that this has in the past been frequently urged, but in recent years the opponents of vaccination have themselves furnished the most crushing reply to their own contention.

The neglect of vaccination in places like Gloucester and Leicester has made it quite impossible to say that the unvaccinated there belong either to a specially unhealthy or to a poverty stricken class of the community. Yet in such towns Small Pox never fails to make the same kind of differentiation between the vaccinated and the unvaccinated as it has done in Liverpool.

It attacks far more in proportion of the unvaccinated than of the vaccinated. If the comparison be confined to households invaded by Small Pox, to persons in every respect breathing the same, vitiated or unvitiated air, eating the same food or bad food, surrounded by the same degree of cleanliness or dirt, Small Pox yet succeeds in picking out the unvaccinated for its victims, and in passing by the vaccinated to such a degree as to leave no other possible explanation open to any reasonable being than that it is vaccination which makes the difference. In the same way as regards fatality rates, whether the epidemic be severe in type as in Gloucester, or mild in type as in Leicester, the fatality rate is much higher in the unvaccinated than in the vaccinated, and the difference between the rates is all the greater according to the recentness of the protective operation.

In tables of statistics where age periods are separately compared that truth has been demonstrated over and over again, and the Royal Commission in dealing with the matter took special care to deduct all deaths under one year of age, so as to answer any criticism based on

the high mortality of Small Pox in the earliest months of life, before vaccination is obligatory.

As concerns recent re-vaccinations, the story of Liverpool supports the story of Glasgow. In Glasgow the recently re-vaccinated numbered 400,000, and not one of them was notified as suffering from Small Pox. In Liverpool the experience of the 80,000 recently re-vaccinated was identical. The straits to which the Liverpool "anti's" are reduced in seeking to get away from these facts are pitiful. They say that a majority of the 80,000 were not re-vaccinated until after exposure to Small Pox.

Whether that is so we know not, though the proportion seems excessive, but in any case, how does it help to weaken the case of vaccination ?

It is an accepted part of the doctrine of vaccination that if the operation be performed within a short time after exposure to infection, and the vaccine verticle duly results, Small Pox can be prevented. Supposing that in the 80,000 there were 50,000 contacts of this sort, surely their escape is a triumph for vaccination.

Then again, as to the alleged minority—say of 30,000 —who were re-vaccinated without exposure to Small Pox, is not their entire freedom from subsequent seizure a sufficiently large statistical fact to prove the value of vaccination to all who are capable of receiving proof ?

Is it not also a confirmation of the much more extensive experience of Glasgow above referred to ? In the course of the tract we have the usual insinuations about the medical profession being financially interested in the maintenance of vaccination, and about its statistics being untrustworthy. These are innuendoes that come home to roost, and we do not doubt that the people of Liverpool will be able to estimate them at their proper value.

("British Medical Journal," Vol. 1, 1883, page 1506.)

# Cities and Towns in which Small Pox occurred during 1903 :—

| Town. | Date. | Cases. |
|---|---|---|
| Bristol | Jan. 3 | 1 |
| Wolverhampton | „ | 1 |
| West Bromwich | „ | 1 |
| Birmingham | „ | 2 |
| Chesterfield | „ | 3 |
| Stockport | „ | 5 |
| Chester | „ | 1 |
| Birkenhead | „ | 1 |
| Bootle | „ | 1 |
| Liverpool | „ | 48 |
| Waterloo - with - Seaforth | „ | 1 |
| St. Helens | „ | 2 |
| Wigan | „ | 2 |
| Bolton | „ | 6 |
| Radcliffe | „ | 1 |
| Gorton | „ | 1 |
| Manchester | „ | 7 |
| Salford | „ | 6 |
| Ashton-u-Lyne | „ | 3 |
| Middleton | „ | 1 |
| Oldham | „ | 12 |
| Rochdale | „ | 1 |
| Burnley | „ | 12 |
| Nelson | „ | 1 |
| Blackburn | „ | 6 |
| Preston | „ | 1 |
| Huddersfield | „ | 3 |
| Brighouse | „ | 1 |
| Bradford | „ | 8 |
| Leeds | „ | 7 |
| Barnsley | „ | 1 |
| Sheffield | „ | 3 |
| Rotherham | „ | 7 |
| Kingston-on-Hull | „ | 1 |
| Penrith | „ | 1 |
| Merthyr Tydvil | „ | 2 |
| London | „ | 1 |
| Hanley | Jan. 10 | 2 |
| Walsall | „ | 2 |
| Birmingham | „ | 1 |
| Aston Manor | „ | 4 |
| Leicester | „ | 11 |
| Nottingham | „ | 1 |
| Derby | „ | 2 |
| Chesterfield | „ | 1 |
| Stockport | „ | 8 |
| Birkenhead | „ | 1 |
| Bootle | „ | 5 |
| Liverpool | „ | 59 |
| St. Helens, Lanc. | „ | 2 |
| Widnes | „ | 1 |
| Wigan | „ | 2 |
| Leigh | „ | 1 |
| Bolton | „ | 5 |
| Farnworth | „ | 1 |
| Bury | „ | 1 |
| Eccles | „ | 5 |
| Manchester | Jan. 10 | 6 |
| Salford | „ | 11 |
| Ashton-u-Lyne | „ | 1 |
| Oldham | „ | 9 |
| Rochdale | „ | 1 |
| Rawtenstall | „ | 1 |
| Burnley | „ | 7 |
| Colne | „ | 1 |
| Blackburn | „ | 6 |
| Preston | „ | 4 |
| Keighley | „ | 1 |
| Huddersfield | „ | 5 |
| Halifax | „ | 2 |
| Bradford | „ | 21 |
| Leeds | „ | 3 |
| Wakefield | „ | 2 |
| Barnsley | „ | 11 |
| Sheffield | „ | 1 |
| Rotherham | „ | 2 |
| Doncaster | „ | 4 |
| Goole | „ | 1 |
| York | „ | 1 |
| South Shields | „ | 1 |
| Penrith | „ | 1 |
| Merthyr Tydvil | „ | 1 |
| London | „ | 3 |
| Worthing | Jan. 17 | 1 |
| Hornsey | „ | 1 |
| Bristol | „ | 1 |
| Shrewsbury | „ | 1 |
| Hanley | „ | 4 |
| Stoke-on-Trent | „ | 1 |
| Walsall | „ | 6 |
| Worcester | „ | 1 |
| Birmingham | „ | 1 |
| Aston Manor | „ | 4 |
| Leicester | „ | 18 |
| Nottingham | „ | 13 |
| Derby | „ | 5 |
| Chesterfield | „ | 1 |
| Hyde | „ | 1 |
| Stockport | „ | 8 |
| Crewe | „ | 2 |
| Bootle | „ | 6 |
| Liverpool | „ | 41 |
| Waterloo - with - Seaforth | „ | 1 |
| St. Helens, Lanc. | „ | 1 |
| Warrington | „ | 1 |
| Bolton | „ | 7 |
| Manchester | „ | 16 |
| Salford | „ | 14 |
| Ashton-u-Lyne | „ | 4 |
| Middleton | „ | 1 |
| Oldham | „ | 20 |
| Rawtenstall | „ | 2 |
| Burnley | „ | 6 |
| Nelson | „ | 1 |
| Blackburn | Jan. 17 | |
| Blackpool | „ | |
| Lancaster | „ | |
| Keighley | „ | |
| Todmorden | „ | |
| Bradford | „ | |
| Leeds | „ | |
| Wakefield | „ | |
| Barnsley | „ | |
| Sheffield | „ | |
| Rotherham | „ | |
| Merthyr Tydvil | „ | |
| London | „ | |
| Brighton | Jan. 24 | |
| Hornsey | „ | |
| Bristol | „ | |
| Hanley | „ | |
| Longton | „ | |
| Burton-on-Trent | „ | |
| Walsall | „ | |
| King's Norton and Northfield | „ | |
| Birmingham | „ | |
| Coventry | „ | |
| Leicester | „ | |
| Nottingham | „ | |
| Derby | „ | |
| Chesterfield | „ | |
| Stockport | „ | |
| Bootle | „ | |
| Liverpool | „ | |
| St. Helens, Lanc. | „ | |
| Widnes | „ | |
| Wigan | „ | |
| Warrington | „ | |
| Bolton | „ | |
| Bury | „ | |
| Radcliffe | „ | |
| Manchester | „ | |
| Salford | „ | |
| Ashton-u-Lyne | „ | |
| Middleton | „ | |
| Oldham | „ | |
| Rawtenstall | „ | |
| Burnley | „ | |
| Colne | „ | |
| Nelson | „ | |
| Blackburn | „ | |
| Preston | „ | |
| Blackpool | „ | |
| Keighley | „ | |
| Huddersfield | „ | |
| Bradford | „ | |
| Leeds | „ | |
| Batley | „ | |
| Wakefield | „ | |
| Sheffield | „ | |
| Rotherham | „ | |

## List of Towns, &c.—Continued.

| Town. | Date. | Cases. |
|---|---|---|
| rthyr Tydvil. . | Jan. 24 | 1 |
| ndon ..... | ,, | 3 |
| chmond ..... | Jan. 31 | 1 |
| atham ..... | ,, | 1 |
| istol ..... | ,, | 2 |
| nley ..... | ,, | 2 |
| oke-on-Trent .. | ,, | 1 |
| alsall ..... | ,, | 5 |
| est Bromwich.. | ,, | 4 |
| rmingham .... | ,, | 8 |
| ton Manor ... | ,, | 2 |
| ventry ..... | ,, | 3 |
| icester..... | ,, | 11 |
| ttingham .... | ,, | 8 |
| esterfield ..... | ,, | 8 |
| rde..... | ,, | 2 |
| ockport ..... | ,, | 5 |
| rkenhead ..... | ,, | 2 |
| erpool ..... | ,, | 131 |
| terloo - with - Seaforth ..... | ,, | 1 |
| Helens, Lanc. | ,, | 2 |
| gan ..... | ,, | 13 |
| lton ..... | ,, | 2 |
| nworth ..... | ,, | 2 |
| dcliffe..... | ,, | 1 |
| les ..... | ,, | 1 |
| nchester ..... | ,, | 21 |
| fford ..... | ,, | 4 |
| nton-u-Lyne.. | ,, | 2 |
| dham ..... | ,, | 10 |
| chdale ..... | ,, | 1 |
| rington ..... | ,, | 1 |
| wtenstall .... | ,, | 4 |
| rnley ..... | ,, | 6 |
| ne..... | ,, | 3 |
| son ..... | ,, | 1 |
| ckburn ..... | ,, | 6 |
| rwen..... | ,, | 4 |
| ghley..... | ,, | 2 |
| ghouse ..... | ,, | 1 |
| ifax ..... | ,, | 2 |
| dford ..... | ,, | 4 |
| ds ..... | ,, | 4 |
| ley..... | ,, | 2 |
| kefield ..... | ,, | 4 |
| nsley ..... | ,, | 1 |
| ffield ..... | ,, | 2 |
| herham ..... | ,, | 3 |
| lisle ..... | ,, | 1 |
| vport, Mon.. . | ,, | 2 |
| diff ..... | ,, | 1 |
| ndon ..... | ,, | 5 |
| tham ..... | Feb. 7 | 1 |
| ghton..... | ,, | 1 |
| rslem ..... | ,, | 3 |
| lton ..... | ,, | 1 |
| ngton ..... | ,, | 1 |

| Town. | Date. | Cases. |
|---|---|---|
| Hanley ..... | Feb. 7 | 7 |
| Stoke-upon-Trent | ,, | 1 |
| Wolverhampton . | ,, | 2 |
| Walsall ..... | ,, | 3 |
| West Bromwich.. | ,, | 2 |
| Kidderminster .. | ,, | 2 |
| King's Norton and Northfield .... | ,, | 1 |
| Smethwick ..... | ,, | 1 |
| Birmingham .... | ,, | 6 |
| Aston Manor ... | ,, | 4 |
| Loughborough .. | ,, | 1 |
| Leicester..... | ,, | 2 |
| Grimsby ..... | ,, | 1 |
| Nottingham .... | ,, | 4 |
| Derby ..... | ,, | 5 |
| Chesterfield ..... | ,, | 4 |
| Stockport ..... | ,, | 2 |
| Birkenhead ..... | ,, | 2 |
| Wallasey ..... | ,, | 1 |
| Bootle ..... | ,, | 8 |
| Liverpool ..... | ,, | 45 |
| Wigan ..... | ,, | 3 |
| Warrington ..... | ,, | 2 |
| Bolton ..... | ,, | 2 |
| Bury ..... | ,, | 1 |
| Radcliffe..... | ,, | 1 |
| Manchester ..... | ,, | 36 |
| Salford ..... | ,, | 6 |
| Ashton-u-Lyne .. | ,, | 9 |
| Stalybridge ..... | ,, | 3 |
| Oldham ..... | ,, | 18 |
| Rochdale ..... | ,, | 2 |
| Rawtenstall .... | ,, | 5 |
| Burnley ..... | ,, | 4 |
| Colne..... | ,, | 5 |
| Blackburn ..... | ,, | 3 |
| Darwen..... | ,, | 2 |
| Preston ..... | ,, | 3 |
| Harrogate ..... | ,, | 1 |
| Keighley..... | ,, | 2 |
| Halifax ..... | ,, | 1 |
| Bradford ..... | ,, | 7 |
| Leeds ..... | ,, | 14 |
| Batley..... | ,, | 2 |
| Wakefield ..... | ,, | 3 |
| Barnsley ..... | ,, | 1 |
| Sheffield ..... | ,, | 3 |
| Rotherham ..... | ,, | 4 |
| Doncaster..... | ,, | 1 |
| York ..... | ,, | 2 |
| Scarborough .... | ,, | 1 |
| London ..... | ,, | 4 |
| Burslem ..... | Feb. 14 | 1 |
| Hanley ..... | ,, | 3 |
| Burton-on-Trent.. | ,, | 1 |
| Wolverhampton.. | ,, | 1 |
| Walsall ..... | ,, | 1 |

| Town. | Date. | Cases. |
|---|---|---|
| West Bromwich . | Feb. 14 | 1 |
| Kidderminster .. | ,, | 1 |
| Birmingham .... | ,, | 16 |
| Nuneaton and Chilvers ..... | ,, | 1 |
| Leicester..... | ,, | 4 |
| Ilkeston ..... | ,, | 1 |
| Nottingham .... | ,, | 2 |
| Derby ..... | ,, | 2 |
| Chesterfield .... | ,, | 4 |
| Glossop ..... | ,, | 1 |
| Stockport ..... | ,, | 2 |
| Birkenhead ..... | ,, | 2 |
| Wallasey ..... | ,, | 1 |
| Bootle ..... | ,, | 3 |
| Liverpool ..... | ,, | 51 |
| Widnes ..... | ,, | 1 |
| Wigan ..... | ,, | 5 |
| Bolton ..... | ,, | 2 |
| Eccles ..... | ,, | 1 |
| Stretford ..... | ,, | 1 |
| Manchester ..... | ,, | 19 |
| Salford ..... | ,, | 6 |
| Ashton-u-Lyne .. | ,, | 1 |
| Stalybridge ..... | ,, | 2 |
| Oldham ..... | ,, | 10 |
| Rochdale ..... | ,, | 2 |
| Accrington ..... | ,, | 3 |
| Haslingden..... | ,, | 1 |
| Rawtenstall .... | ,, | 1 |
| Burnley ..... | ,, | 7 |
| Colne..... | ,, | 1 |
| Nelson ..... | ,, | 2 |
| Blackburn ..... | ,, | 2 |
| Darwen..... | ,, | 1 |
| Chorley ..... | ,, | 1 |
| Preston ..... | ,, | 2 |
| Todmorden ..... | ,, | 1 |
| Huddersfield .... | ,, | 3 |
| Bradford ..... | ,, | 13 |
| Leeds ..... | ,, | 16 |
| Batley..... | ,, | 2 |
| Dewsbury..... | ,, | 3 |
| Wakefield ..... | ,, | 5 |
| Barnsley ..... | ,, | 4 |
| Sheffield ..... | ,, | 1 |
| Rotherham ..... | ,, | 4 |
| London ..... | ,, | 1 |
| Walthamstow ... | Feb. 21 | 1 |
| Bristol ..... | ,, | 1 |
| Shrewsbury ..... | ,, | 1 |
| Newcastle-under-Lyme ..... | ,, | 1 |
| Burslem ..... | ,, | 2 |
| Wolverhampton . | ,, | 1 |
| Walsall ..... | ,, | 1 |
| West Bromwich. . | ,, | 1 |
| Dudley ..... | ,, | 1 |

## List of Towns, &c.—Continurd.

| Town. | Date. | Cases. |
|---|---|---|
| Smethwick ..... | Feb. 21 | 1 |
| Birmingham .... | ,, | 8 |
| Aston Manor ... | ,, | 1 |
| Leicester..... | ,, | 6 |
| Grimsby ..... | ,, | 1 |
| Nottingham .... | ,, | 4 |
| Derby ..... | ,, | 4 |
| Chesterfield ..... | ,, | 2 |
| Glossop ..... | ,, | 1 |
| Stockport ..... | ,, | 2 |
| Macclesfield ..... | ,, | 1 |
| Birkenhead ..... | ,, | 5 |
| Wallasey ..... | ,, | 2 |
| Bootle ..... | ,, | 8 |
| Liverpool ..... | ,, | 104 |
| Waterloo - with-Seaforth ..... | ,, | 2 |
| Wigan ..... | ,, | 5 |
| Warrington ..... | ,, | 1 |
| Leigh ..... | ,, | 1 |
| Bolton ..... | ,, | 3 |
| Bury ..... | ,, | 2 |
| Stretford ..... | ,, | 1 |
| Swinton and Pendlebury ... | ,, | 1 |
| Manchester ..... | ,, | 33 |
| Moss Side ..... | ,, | 1 |
| Salford ..... | ,, | 11 |
| Ashton-u-Lyne .. | ,, | 6 |
| Oldham ..... | ,, | 11 |
| Accrington ..... | ,, | 2 |
| Haslingden .... | ,, | 5 |
| Rochdale ..... | ,, | 1 |
| Burnley ..... | ,, | 10 |
| Chorley ..... | ,, | 1 |
| Preston ..... | ,, | 5 |
| Lancaster ..... | ,, | 1 |
| Huddersfield ... | ,, | 2 |
| Bradford ..... | ,, | 5 |
| Leeds ..... | ,, | 9 |
| Dewsbury..... | ,, | 2 |
| Wakefield ..... | ,, | 9 |
| Sheffield ..... | ,, | 3 |
| London ..... | ,, | 5 |
| Harrow-on-Hill. . | Feb. 28 | 1 |
| Oxford ..... | ,, | 1 |
| Bristol ..... | ,, | 8 |
| Burslem ..... | ,, | 18 |
| Tunstall ..... | ,, | 2 |
| Fenton ..... | ,, | 1 |
| Hanley ..... | ,, | 3 |
| Walsall ..... | ,, | 2 |
| West Bromwich.. | ,, | 2 |
| Birmingham .... | ,, | 11 |
| Nuneaton ..... | ,, | 1 |
| Coventry ..... | ,, | 1 |
| Leicester..... | ,, | 7 |
| Grimsby ..... | ,, | 1 |

| Town. | Date. | Cases. |
|---|---|---|
| Nottingham .... | Feb. 28 | 2 |
| Derby ..... | ,, | 1 |
| Crewe ..... | ,, | 1 |
| Birkenhead ..... | ,, | 4 |
| Bootle ..... | ,, | 4 |
| Liverpool ..... | ,, | 60 |
| St. Helens, Lanc. | ,, | 5 |
| Wigan ..... | ,, | 1 |
| Bolton ..... | ,, | 3 |
| Bury ..... | ,, | 3 |
| Streftord ..... | ,, | 1 |
| Swinton and Pendlebury ... | ,, | 2 |
| Manchester ..... | ,, | 17 |
| Moss Side ..... | ,, | 2 |
| Ashton-u-Lyne .. | ,, | 8 |
| Middleton..... | ,, | 3 |
| Oldham ..... | ,, | 8 |
| Rochdale ..... | ,, | 2 |
| Accrington ..... | ,, | 3 |
| Haslingden..... | ,, | 2 |
| Rawtenstall ... | ,, | 2 |
| Burnley ..... | ,, | 3 |
| Blackburn ..... | ,, | 4 |
| Preston ..... | ,, | 2 |
| Blackpool ..... | ,, | 7 |
| Lancaster ..... | ,, | 1 |
| Todmorden ..... | ,, | 1 |
| Halifax ..... | ,, | 1 |
| Bradford ..... | ,, | 3 |
| Leeds ..... | ,, | 9 |
| Dewsbury..... | ,, | 3 |
| Wakefield ..... | ,, | 4 |
| Rotherham ..... | ,, | 3 |
| York ..... | ,, | 1 |
| Kingston-on-Hull. | ,, | 2 |
| South Shields ... | ,, | 3 |
| London ..... | ,, | 1 |
| Burslem ..... | Mar. 7 | 5 |
| Tunstall ..... | ,, | 1 |
| Hanley ..... | ,, | 2 |
| Walsall ..... | ,, | 5 |
| West Bromwich .. | ,, | 1 |
| Aston Manor ... | ,, | 1 |
| Leicester..... | ,, | 5 |
| Ilkeston ..... | ,, | 2 |
| Nottingham .... | ,, | 72 |
| Derby ..... | ,, | 1 |
| Chesterfield ..... | ,, | 1 |
| Stockport ..... | ,, | 2 |
| Macclesfield ..... | ,, | 2 |
| Birkenhead ..... | ,, | 12 |
| Wallasey ..... | ,, | 1 |
| Bootle ..... | ,, | 8 |
| Liverpool ..... | ,, | 88 |
| Waterloo - with - Seaforth ..... | ,, | 1 |
| St. Helens, Lanc. | ,, | 2 |

| Town. | Date. | Cases. |
|---|---|---|
| Wigan ..... | Mar. 7 | 2 |
| Leigh ..... | ,, | 1 |
| Bolton ..... | ,, | 2 |
| Bury ..... | ,, | 5 |
| Eccles ..... | ,, | 1 |
| Swinton and Pendlebury .. | ,, | 2 |
| Manchester ..... | ,, | 19 |
| Salford ..... | ,, | 11 |
| Ashton-u-Lyne .. | ,, | 11 |
| Oldham ..... | ,, | 4 |
| Rochdale ..... | ,, | 2 |
| Accrington ..... | ,, | 8 |
| Rawtenstall ... | ,, | 1 |
| Burnley ..... | ,, | 15 |
| Nelson ..... | ,, | 1 |
| Blackburn ..... | ,, | 1 |
| Blackpool ..... | ,, | 2 |
| Keighley..... | ,, | 4 |
| Todmorden ... | ,, | 1 |
| Huddersfield .... | ,, | 1 |
| Leeds ..... | ,, | 14 |
| Dewsbury..... | ,, | 6 |
| Wakefield ..... | ,, | 4 |
| Barnsley ..... | ,, | 3 |
| Sheffield ..... | ,, | 2 |
| Rotherham ..... | ,, | 2 |
| Doncaster..... | ,, | 2 |
| York ..... | ,, | 2 |
| Sunderland ..... | ,, | 1 |
| Cardiff ..... | ,, | 5 |
| London ..... | ,, | 3 |
| East Ham ..... | Mar.14 | 1 |
| Burslem ..... | ,, | 3 |
| Hanley ..... | ,, | 5 |
| Stoke-on-Trent .. | ,, | 1 |
| Walsall ..... | ,, | 5 |
| Birmingham .... | ,, | 21 |
| Aston Manor ... | ,, | 1 |
| Coventry ..... | ,, | 1 |
| Leicester..... | ,, | 3 |
| Grimsby ..... | ,, | 3 |
| Nottingham .... | ,, | 5 |
| Chesterfield ..... | ,, | 1 |
| Macclesfield ..... | ,, | 2 |
| Crewe ..... | ,, | 1 |
| Birkenhead ..... | ,, | 1 |
| Wallasey ..... | ,, | 1 |
| Bootle ..... | ,, | 4 |
| Liverpool ... ... | ,, | 84 |
| St. Helens, Lanc. | ,, | 2 |
| Widnes ..... | ,, | 2 |
| Wigan ..... | ,, | 1 |
| Warrington ..... | ,, | 1 |
| Leigh ..... | ,, | 1 |
| Bolton ..... | ,, | 1 |
| Bury ..... | ,, | 1 |
| Eccles ..... | ,, | 1 |

## List of Towns, &c.—Continued.

| Town. | Date. | Cases. |
|---|---|---|
| ..ester ..... | Mar. 14 | 23 |
| ..-u-Lyne .. | „ | 4 |
| ..ton..... | „ | 4 |
| ..n ..... | „ | 7 |
| ..gton ..... | „ | 3 |
| ..gden..... | „ | 4 |
| ..nstall .... | „ | 3 |
| ..y ..... | „ | 5 |
| ..... | „ | 3 |
| ..urn ..... | „ | 1 |
| ..n..... | „ | 1 |
| ..n ..... | „ | 3 |
| ..ool ..... | „ | 2 |
| ..rden ..... | „ | 1 |
| ..irsfield .... | „ | 2 |
| ..rd ..... | „ | 4 |
| ..... | „ | 12 |
| ..ury..... | „ | 2 |
| ..eld ..... | „ | 3 |
| ..ld ..... | „ | 2 |
| ..rham ..... | „ | 2 |
| ..-on-on-Hull. | „ | 6 |
| ..rrough .... | „ | 2 |
| ..gton .... | „ | 1 |
| ..Hartlepool. | „ | 2 |
| ..rland ..... | „ | 1 |
| ..Shields ... | „ | 2 |
| ..... | „ | 4 |
| ..n ..... | „ | 1 |
| ..on-on-T. .. | Mar. 21 | 1 |
| ..... | „ | 1 |
| ..dge Wells. | „ | 2 |
| ..mpton ... | „ | 1 |
| ..... | „ | 1 |
| ..n ..... | „ | 4 |
| ..... | „ | 1 |
| ..l ..... | „ | 3 |
| ..gham .... | „ | 12 |
| ..Manor ... | „ | 2 |
| ..orough .. | „ | 1 |
| ..er..... | „ | 8 |
| ..eld ..... | „ | 1 |
| ..gham .... | „ | 3 |
| ..... | „ | 1 |
| ..rfield ..... | „ | 1 |
| ..p ..... | „ | 1 |
| ..ort ..... | „ | 1 |
| ..... | „ | 1 |
| ..... | „ | 1 |
| ..head ..... | „ | 8 |
| ..ey ..... | „ | 4 |
| ..... | „ | 1 |
| ..ool ..... | „ | 85 |
| ..elens ..... | „ | 1 |
| ..... | „ | 2 |
| ..... | „ | 3 |
| ..... | „ | 1 |
| ..... | „ | 1 |

| Town. | Date. | Cases. |
|---|---|---|
| Bury ..... | Mar. 21 | 4 |
| Radcliffe ..... | „ | 2 |
| Stretford ..... | „ | 2 |
| Manchester..... | „ | 8 |
| Moss Side ..... | „ | 1 |
| Ashton-u-Lyne .. | „ | 12 |
| Chadderton ..... | „ | 2 |
| Middleton..... | „ | 1 |
| Oldham ..... | „ | 5 |
| Rochdale ..... | „ | 2 |
| Accrington ..... | „ | 3 |
| Haslingden..... | „ | 2 |
| Rawtenstall .... | „ | 1 |
| Burnley ..... | „ | 5 |
| Blackburn ..... | „ | 1 |
| Darwen..... | „ | 3 |
| Chorley ..... | „ | 1 |
| Preston ..... | „ | 4 |
| Todmorden ..... | „ | 3 |
| Huddersfield .... | „ | 1 |
| Bradford ..... | „ | 4 |
| Leeds ..... | „ | 10 |
| Dewsbury..... | „ | 6 |
| Wakefield ..... | „ | 4 |
| Barnsley ..... | „ | 1 |
| Sheffield ..... | „ | 2 |
| Kingston-on-Hull. | „ | 11 |
| Middlesbro' .... | „ | 1 |
| South Shields ... | „ | 7 |
| Newcastle-on-Tyne | „ | 2 |
| Cardiff ..... | „ | 5 |
| London ..... | „ | 2 |
| Tunbridge Wells.. | Mar. 28 | 2 |
| Portsmouth ..... | „ | 1 |
| West Ham..... | „ | 1 |
| Ilford ..... | „ | 1 |
| Burslem ..... | „ | 1 |
| Walsall ..... | „ | 3 |
| Birmingham .... | „ | 17 |
| Leicester..... | „ | 4 |
| Nottingham .... | „ | 6 |
| Derby ..... | „ | 1 |
| Chesterfield ..... | „ | 1 |
| Macclesfield ..... | „ | 5 |
| Birkenhead ..... | „ | 6 |
| Wallasey ..... | „ | 1 |
| Bootle ..... | „ | 3 |
| Liverpool ..... | „ | 67 |
| St. Helens, Lanc... | „ | 3 |
| Southport..... | „ | 1 |
| Wigan ..... | „ | 1 |
| Bolton ..... | „ | 3 |
| Bury ..... | „ | 6 |
| Radcliffe..... | „ | 2 |
| Manchester ..... | „ | 18 |
| Salford ..... | „ | 2 |
| Ashton-u-Lyne .. | „ | 4 |
| Middleton..... | „ | 3 |

| Town. | Date. | Cases. |
|---|---|---|
| Oldham ..... | Mar. 28 | 5 |
| Rochdale ..... | „ | 11 |
| Accrington ..... | „ | 3 |
| Blackburn ..... | „ | 6 |
| Darwen..... | Mar. 28 | 1 |
| Todmorden ..... | „ | 2 |
| Huddersfield .... | „ | 5 |
| Brighouse ..... | „ | 3 |
| Bradford ..... | „ | 4 |
| Leeds ..... | „ | 16 |
| Batley..... | „ | 1 |
| Dewsbury..... | „ | 6 |
| Wakefield ..... | „ | 4 |
| Barnsley ..... | „ | 1 |
| Sheffield ..... | „ | 3 |
| Rotherham ..... | „ | 3 |
| Kingston-on-Hull. | „ | 3 |
| Middlesbrough... | „ | 1 |
| Darlington .... | „ | 5 |
| Hebburn..... | „ | 1 |
| Newcastle-on-Tyne | „ | 3 |
| Cardiff ..... | „ | 5 |
| London ..... | „ | 4 |
| Croydon ..... | Apr. 4 | 8 |
| Kingston-upon-Thames..... | „ | 3 |
| Gravesend ..... | „ | 1 |
| Portsmouth ..... | „ | 1 |
| Northampton ... | „ | 2 |
| East Ham ..... | „ | 1 |
| Ilford ..... | „ | 3 |
| Bristol ..... | „ | 5 |
| Burslem ..... | „ | 4 |
| Birmingham .... | „ | 8 |
| Coventry ..... | „ | 1 |
| Loughborough .. | „ | 1 |
| Leicester..... | „ | 9 |
| Mansfield ..... | „ | 7 |
| Nottingham .... | „ | 6 |
| Macclesfield ..... | „ | 2 |
| Birkenhead ..... | „ | 7 |
| Bootle ..... | „ | 2 |
| Liverpool ..... | „ | 62 |
| Southport..... | „ | 1 |
| Wigan ..... | „ | 5 |
| Bolton ..... | „ | 1 |
| Bury ..... | „ | 3 |
| Heywood ..... | „ | 3 |
| Manchester ..... | „ | 24 |
| Moss Side ..... | „ | 1 |
| Salford ..... | „ | 1 |
| Ashton-u-Lyne... | „ | 5 |
| Middleton..... | „ | 1 |
| Oldham ..... | „ | 1 |
| Rochdale ..... | „ | 3 |
| Haslingden..... | „ | 1 |
| Burnley ..... | „ | 4 |
| Nelson ..... | „ | 1 |

## List of Towns, &c.—Continued.

| Town. | Date. | Cases. |
|---|---|---|
| Blackburn | Apr. 4 | 3 |
| Keighley | ,, | 1 |
| Huddersfield | ,, | 1 |
| Halifax | ,, | 1 |
| Bradford | ,, | 3 |
| Leeds | ,, | 10 |
| Dewsbury | ,, | 2 |
| Wakefield | ,, | 7 |
| Barnsley | ,, | 1 |
| Sheffield | ,, | 1 |
| Kingston-on-Hull. | ,, | 7 |
| Darlington | ,, | 2 |
| South Shields | ,, | 2 |
| Newcastle-on-Tyne | ,, | 1 |
| Carlisle | ,, | 1 |
| Cardiff | ,, | 1 |
| Merthyr Tydvil. | ,, | 1 |
| Bangor | ,, | 1 |
| London | ,, | 3 |
| Croydon | Apr. 11 | 5 |
| Kingston - on - Thames | ,, | 5 |
| Tunbridge Wells. | ,, | 4 |
| Northampton | ,, | 2 |
| Bristol | ,, | 1 |
| Newcastle-u-Lyme | ,, | 1 |
| Walsall | ,, | 1 |
| West Bromwich. | ,, | 2 |
| Birmingham | ,, | 6 |
| Coventry | ,, | 1 |
| Leicester | ,, | 1 |
| Derby | ,, | 1 |
| Macclesfield | ,, | 1 |
| Birkenhead | ,, | 8 |
| Bootle | ,, | 7 |
| Liverpool | ,, | 66 |
| St. Helens, Lanc. | ,, | 1 |
| Southport | ,, | 1 |
| Ince-in-Makerfield | ,, | 1 |
| Wigan | ,, | 4 |
| Bury | ,, | 4 |
| Radcliffe | ,, | 4 |
| Gorton | ,, | 1 |
| Manchester | ,, | 12 |
| Salford | ,, | 4 |
| Ashton-u- Lyne. | ,, | 4 |
| Middleton | ,, | 2 |
| Oldham | ,, | 14 |
| Rochdale | ,, | 2 |
| Accrington | ,, | 3 |
| Blackburn | ,, | 1 |
| Preston | ,, | 1 |
| Lancaster | ,, | 1 |
| Todmorden | ,, | 1 |
| Bradford | ,, | 4 |
| Leeds | ,, | 7 |
| Dewsbury | ,, | 6 |
| Wakefield | ,, | 5 |

| Town. | Date. | Cases. |
|---|---|---|
| Barnsley | Apr. 11 | 2 |
| Sheffield | ,, | 4 |
| Kingston-on-Hull. | ,, | 3 |
| South Shields | ,, | 4 |
| Tynemouth | ,, | 2 |
| Cardiff | ,, | 2 |
| London | ,, | 5 |
| Croydon | Apr. 18 | 1 |
| Kingston - on - Thames | ,, | 1 |
| Tunbridge Wells, | ,, | 1 |
| Oxford | ,, | 1 |
| Northampton | ,, | 7 |
| Bath | ,, | 10 |
| Bristol | ,, | 2 |
| Newcastle-u-Lyme | ,, | 1 |
| Hanley | ,, | 2 |
| Walsall | ,, | 2 |
| Birmingham | ,, | 1 |
| Aston Manor | ,, | 2 |
| Coventry | ,, | 5 |
| Leicester | ,, | 8 |
| Mansfield | ,, | 3 |
| Nottingham | ,, | 2 |
| Derby | ,, | 1 |
| Macclesfield | ,, | 1 |
| Birkenhead | ,, | 5 |
| Bootle | ,, | 3 |
| Liverpool | ,, | 94 |
| Widnes | ,, | 1 |
| Ince-in-Makerfield | ,, | 1 |
| Wigan | ,, | 5 |
| Warrington | ,, | 1 |
| Bury | ,, | 1 |
| Eccles | ,, | 2 |
| Manchester | ,, | 5 |
| Salford | ,, | 3 |
| Ashton-u-Lyne | ,, | 6 |
| Middleton | ,, | 2 |
| Oldham | ,, | 8 |
| Rochdale | ,, | 3 |
| Accrington | ,, | 2 |
| Haslingden | ,, | 1 |
| Rawtenstall | ,, | 2 |
| Burnley | ,, | 19 |
| Nelson | ,, | 1 |
| Blackburn | ,, | 1 |
| Huddersfield | ,, | 1 |
| Bradford | ,, | 3 |
| Leeds | ,, | 11 |
| Dewsbury | ,, | 6 |
| Wakefield | ,, | 4 |
| Sheffield | ,, | 2 |
| Goole | ,, | 1 |
| Kingston-on-Hull. | ,, | 5 |
| Darlington | ,, | 2 |
| Sunderland | ,, | 7 |
| Hebburn | ,, | 1 |

| Town. | Date. | Cases. |
|---|---|---|
| South Shields | Apr. 18 | |
| Gateshead | ,, | |
| Newcastle-on-Tyne | ,, | |
| Cardiff | ,, | |
| London | ,, | |
| Kingston - upon - Thames | Apr. 25 | |
| Winchester | ,, | |
| Oxford | ,, | |
| Northampton | ,, | |
| Kettering | ,, | |
| East Ham | ,, | |
| Leyton | ,, | |
| Ilford | ,, | |
| Bath | ,, | |
| Cheltenham | ,, | |
| Stoke-upon-Trent. | ,, | |
| Wolverhampton. | ,, | |
| Walsall | ,, | |
| West Bromwich. | ,, | |
| Dudley | ,, | |
| Birmingham | ,, | |
| Aston Manor | ,, | |
| Coventry | ,, | |
| Loughborough | ,, | |
| Leicester | ,, | |
| Mansfield | ,, | |
| Nottingham | ,, | |
| Chesterfield | ,, | |
| Stockport | ,, | |
| Macclesfield | ,, | |
| Birkenhead | ,, | |
| Bootle | ,, | |
| Liverpool | ,, | |
| Farnworth | ,, | |
| Bury | ,, | |
| Heywood | ,, | |
| Manchester | ,, | |
| Salford | ,, | |
| Ashton-u-Lyne | ,, | |
| Middleton | ,, | |
| Oldham | ,, | |
| Rochdale | ,, | |
| Accrington | ,, | |
| Burnley | ,, | |
| Blackburn | ,, | |
| Halifax | ,, | |
| Bradford | ,, | |
| Leeds | ,, | |
| Batley | ,, | |
| Dewsbury | ,, | |
| Wakefield | ,, | |
| Barnsley | ,, | |
| Sheffield | ,, | |
| Kingston-on-Hull. | ,, | |
| Darlington | ,, | |
| Sunderland | ,, | |
| Jarrow | ,, | |

## List of Towns, &c.—Continued.

| Town. | Date. | Cases. |
|---|---|---|
| shead ..... | Apl. 25 | 2 |
| castle-on-Tyne | ,, | 2 |
| iff ..... | ,, | 3 |
| ypridd ..... | ,, | 1 |
| lon ..... | ,, | 10 |
| ow-on-Hill . | May 2 | 5 |
| sden ..... | ,, | 1 |
| hampton ... | ,, | 1 |
| ering ..... | ,, | 1 |
| l ..... | ,, | 1 |
| ol ..... | ,, | 3 |
| ey ..... | ,, | 5 |
| on-on-Trent.. | ,, | 2 |
| Bromwich. . | ,, | 3 |
| 's Norton | ,, | 1 |
| ingham .... | ,, | 5 |
| aton ..... | ,, | 2 |
| ntry ..... | ,, | 10 |
| l Leamington | | |
| ..... | ,, | 1 |
| nborough .. | ,, | 1 |
| ster..... | ,, | 21 |
| field ..... | ,, | 2 |
| ngham .... | ,, | 1 |
| esfield ..... | ,, | 2 |
| nhead ..... | ,, | 3 |
| sey ..... | ,, | 1 |
| e ..... | ,, | 7 |
| pool ..... | ,, | 69 |
| port..... | ,, | 1 |
| ..... | ,, | 2 |
| ngton ..... | ,, | 1 |
| ..... | ,, | 2 |
| ood ..... | ,, | 1 |
| ord ..... | ,, | 1 |
| nester ..... | ,, | 6 |
| Side ..... | ,, | 1 |
| d ..... | ,, | 9 |
| n-u-Lyne .. | ,, | 2 |
| erton ..... | ,, | 1 |
| eton..... | ,, | 1 |
| m ..... | ,, | 6 |
| ale ..... | ,, | 7 |
| gton ..... | ,, | 1 |
| gden..... | ,, | 3 |
| y ..... | ,, | 11 |
| ..... | ,, | 1 |
| urn ..... | ,, | 8 |
| n..... | ,, | 1 |
| n ..... | ,, | 1 |
| rden ..... | ,, | 1 |
| rd ..... | ,, | 13 |
| ..... | ,, | 14 |
| ..... | ,, | 1 |
| ury..... | ,, | 2 |
| ield ..... | ,, | 6 |
| ey ..... | ,, | 1 |
| ld ..... | ,, | 2 |

| Town. | Date. | Cases. |
|---|---|---|
| Rotherham ..... | May 2 | 1 |
| Goole ..... | ,, | 1 |
| Kingston-on-Hull. | ,, | 2 |
| Darlington..... | ,, | 2 |
| Sunderland ..... | ,, | 1 |
| Jarrow ..... | ,, | 3 |
| Gateshead ..... | ,, | 1 |
| Newcastle-on-Tyne | ,, | 1 |
| Cardiff ..... | ,, | 4 |
| Swansea ..... | ,, | 1 |
| London ..... | ,, | 12 |
| Kingston - on - Thames..... | May 9 | 1 |
| Gillingham ..... | ,, | 1 |
| Harrow-on-the-Hill | ,, | 2 |
| Oxford ..... | ,, | 4 |
| Northampton ... | ,, | 7 |
| Kettering ..... | ,, | 2 |
| East Ham ..... | ,, | 1 |
| Leyton ..... | ,, | 1 |
| Tunstall ..... | ,, | 1 |
| Fenton ..... | ,, | 1 |
| Walsall ..... | ,, | 5 |
| West Bromwich. . | ,, | 2 |
| Dudley ..... | ,, | 3 |
| Birmingham .... | ,, | 19 |
| Aston Manor ... | ,, | 3 |
| Nuneaton and Chilters Coton.. | ,, | 1 |
| Coventry ..... | ,, | 9 |
| Leicester..... | ,, | 30 |
| Mansfield ..... | ,, | 2 |
| Nottingham .... | ,, | 2 |
| Chesterfield ..... | ,, | 1 |
| Stockport ..... | ,, | 1 |
| Macclesfield ..... | ,, | 1 |
| Birkenhead ..... | ,, | 4 |
| Wallasey ..... | ,, | 0 |
| Bootle ..... | ,, | 3 |
| Liverpool ..... | ,, | 62 |
| Wigan ..... | ,, | 1 |
| Bury ..... | ,, | 7 |
| Heywood ..... | ,, | 2 |
| Eccles ..... | ,, | 1 |
| Manchester ..... | ,, | 10 |
| Salford ..... | ,, | 31 |
| Ashton-u-Lyne .. | ,, | 5 |
| Chadderton ..... | ,, | 2 |
| Middleton..... | ,, | 1 |
| Oldham ..... | ,, | 13 |
| Rochdale ..... | ,, | 3 |
| Accrington ..... | ,, | 2 |
| Burnley ..... | ,, | 18 |
| Blackburn ..... | ,, | 8 |
| Preston ..... | ,, | 1 |
| Todmorden ..... | ,, | 2 |
| Halifax ..... | ,, | 4 |
| Bradford ..... | ,, | 17 |

| Town. | Date. | Cases. |
|---|---|---|
| Leeds ..... | May 9 | 17 |
| Batley..... | ,, | 2 |
| Dewsbury..... | ,, | 3 |
| Wakefield ..... | ,, | 2 |
| Barnsley ..... | ,, | 1 |
| Sheffield ..... | ,, | 1 |
| Goole ..... | ,, | 1 |
| Kingston-on-Hull. | ,, | 9 |
| Middlesbrough .. | ,, | 1 |
| Darlington ..... | ,, | 3 |
| Hartlepool ..... | ,, | 3 |
| West Hartlepool.. | ,, | 1 |
| Sunderland ..... | ,, | 1 |
| Jarrow ..... | ,, | 3 |
| Gateshead ..... | ,, | 1 |
| Newcastle-on-Tyne | ,, | 1 |
| Cardiff ..... | ,, | 5 |
| London ..... | ,, | 15 |
| Oxford ..... | May 16 | 1 |
| Northampton ... | ,, | 7 |
| Colchester ..... | ,, | 5 |
| Bristol ..... | ,, | 6 |
| Tunstall ..... | ,, | 1 |
| Stoke-upon-Trent. | ,, | 1 |
| Walsall ..... | ,, | 1 |
| West Bromwich.. | ,, | 1 |
| Dudley ..... | ,, | 3 |
| Kidderminster .. | ,, | 1 |
| Birmingham .... | ,, | 5 |
| Nuneaton ..... | ,, | 3 |
| Coventry ..... | ,, | 9 |
| Mansfield ..... | ,, | 1 |
| Nottingham .... | ,, | 5 |
| Derby ..... | ,, | 1 |
| Birkenhead ..... | ,, | 4 |
| Wallasey ..... | ,, | 1 |
| Bootle ..... | ,, | 3 |
| Liverpool ..... | ,, | 37 |
| Wigan ..... | ,, | 2 |
| Bolton ..... | ,, | 1 |
| Bury ..... | ,, | 3 |
| Heywood ..... | ,, | 9 |
| Gorton ..... | ,, | 2 |
| Manchester ..... | ,, | 10 |
| Salford ..... | ,, | 4 |
| Ashton-u-Lyne .. | ,, | 2 |
| Middleton..... | ,, | 1 |
| Oldham ..... | ,, | 2 |
| Rochdale ..... | ,, | 11 |
| Accrington ..... | ,, | 2 |
| Haslingden..... | ,, | 2 |
| Rawtenstall .... | ,, | 2 |
| Burnley ..... | ,, | 16 |
| Blackburn ..... | ,, | 1 |
| Chorley ..... | ,, | 1 |
| Preston ..... | ,, | 1 |
| Huddersfield .... | ,, | 1 |
| Halifax ..... | ,, | 2 |

## List of Towns, &c.—Continued.

| Town. | Date. | Cases. |
|---|---|---|
| Bradford | May 16 | 19 |
| Leeds | ,, | 17 |
| Batley | ,, | 3 |
| Dewsbury | ,, | 8 |
| Wakefield | ,, | 2 |
| Sheffield | ,, | 4 |
| York | ,, | 1 |
| Kingston-on-Hull. | ,, | 6 |
| Darlington | ,, | 4 |
| Stockton-on-Tees. | ,, | 1 |
| Hartlepool | ,, | 3 |
| Sunderland | ,, | 1 |
| South Shields | ,, | 1 |
| Newcastle-on-Tyne | ,, | 3 |
| Bury | ,, | 1 |
| Cardiff | ,, | 6 |
| London | ,, | 11 |
| Bromley | May 23 | 1 |
| Harrow-on-Hill. | ,, | 11 |
| Willesden | ,, | 1 |
| Watford | ,, | 1 |
| Northampton | ,, | 9 |
| Walthamstow | ,, | 1 |
| Colchester | ,, | 2 |
| Tunstall | ,, | 1 |
| Hanley | ,, | 5 |
| Willenhall | ,, | 1 |
| Handsworth | ,, | 1 |
| Birmingham | ,, | 3 |
| Loughborough | ,, | 1 |
| Leicester | ,, | 15 |
| Nottingham | ,, | 2 |
| Derby | ,, | 2 |
| Stockport | ,, | 2 |
| Macclesfield | ,, | 1 |
| Chester | ,, | 24 |
| Birkenhead | ,, | 5 |
| Wallasey | ,, | 5 |
| Bootle | ,, | 3 |
| Liverpool | ,, | 46 |
| Waterloo - with - Seaforth | ,, | 1 |
| Widnes | ,, | 1 |
| Southport | ,, | 2 |
| Bury | ,, | 1 |
| Heywood | ,, | 4 |
| Eccles | ,, | 1 |
| Manchester | ,, | 14 |
| Salford | ,, | 5 |
| Ashton-u-Lyne. | ,, | 1 |
| Chadderton | ,, | 4 |
| Middleton | ,, | 2 |
| Oldham | ,, | 7 |
| Accrington | ,, | 1 |
| Burnley | ,, | 13 |
| Blackburn | ,, | 6 |
| Darwen | ,, | 1 |
| Chorley | ,, | 1 |
| Keighley | May 23 | 1 |
| Brighouse | ,, | 1 |
| Halifax | ,, | 14 |
| Bradford | ,, | 36 |
| Leeds | ,, | 25 |
| Batley | ,, | 2 |
| Dewsbury | ,, | 1 |
| Wakefield | ,, | 1 |
| Barnsley | ,, | 1 |
| Kingston-on-Hull. | ,, | 9 |
| Darlington | ,, | 2 |
| Hartlepool | ,, | 4 |
| West Hartlepool. | ,, | 2 |
| Gateshead | ,, | 4 |
| Tynemouth | ,, | 1 |
| Newport | ,, | 1 |
| Cardiff | ,, | 3 |
| London | ,, | 18 |
| Harrow-on-Hill. | May 30 | 1 |
| Enfield | ,, | 1 |
| Oxford | ,, | 3 |
| Peterborough | ,, | 1 |
| Southend-on-Sea. | ,, | 1 |
| Colchester | ,, | 7 |
| Swindon | ,, | 1 |
| Bristol | ,, | 1 |
| Burslem | ,, | 1 |
| Hanley | ,, | 2 |
| Willenhall | ,, | 1 |
| Dudley | ,, | 5 |
| Smethwick | ,, | 1 |
| Birmingham | ,, | 7 |
| Loughborough | ,, | 6 |
| Lincoln | ,, | 1 |
| Nottingham | ,, | 2 |
| Derby | ,, | 3 |
| Chesterfield | ,, | 1 |
| Stockport | ,, | 1 |
| Chester | ,, | 2 |
| Wallasey | ,, | 2 |
| Liverpool | ,, | 33 |
| St. Helens, Lanc. | ,, | 1 |
| Bolton | ,, | 2 |
| Farnworth | ,, | 2 |
| Bury | ,, | 2 |
| Heywood | ,, | 1 |
| Radcliffe | ,, | 1 |
| Manchester | ,, | 17 |
| Salford | ,, | 9 |
| Ashton-u-Lyne | ,, | 3 |
| Stalybridge | ,, | 1 |
| Chadderton | ,, | 2 |
| Middleton | ,, | 1 |
| Oldham | ,, | 4 |
| Rochdale | ,, | 11 |
| Haslingden | ,, | 1 |
| Rawtenstall | ,, | 1 |
| Burnley | ,, | 12 |
| Blackburn | May 30 | 4 |
| Darwen | ,, | 1 |
| Lancaster | ,, | 3 |
| Harrogate | ,, | 1 |
| Brighouse | ,, | 2 |
| Halifax | ,, | 1 |
| Bradford | ,, | 12 |
| Dewsbury | ,, | 6 |
| Wakefield | ,, | 1 |
| Stretfield | ,, | 1 |
| Rotherham | ,, | 1 |
| Kingston-on-Hull. | ,, | 3 |
| Darlington | ,, | 5 |
| Sunderland | ,, | 1 |
| South Shields | ,, | 1 |
| Gateshead | ,, | 4 |
| Newcastle-on-Tyne | ,, | 1 |
| Cardiff | ,, | 4 |
| London | ,, | 9 |
| Kingston - on - Thames | June 6 | 1 |
| Bromley | ,, | 1 |
| Willesden | ,, | 1 |
| Watford | ,, | 4 |
| Southend-on-Sea. | ,, | 4 |
| Colchester | ,, | 6 |
| Bristol | ,, | 1 |
| Burslem | ,, | 1 |
| Hanley | ,, | 2 |
| West Bromwich. | ,, | 5 |
| Dudley | ,, | 4 |
| Smethwick | ,, | 1 |
| Birmingham | ,, | 3 |
| Loughborough | ,, | 3 |
| Leicester | ,, | 2 |
| Derby | ,, | 2 |
| Stockport | ,, | 1 |
| Chester | ,, | 3 |
| Wallasey | ,, | 1 |
| Bootle | ,, | 3 |
| Liverpool | ,, | 52 |
| Southport | ,, | 1 |
| Heywood | ,, | 2 |
| Manchester | ,, | 3 |
| Salford | ,, | 3 |
| Ashton-u-Lyne | ,, | 6 |
| Chadderton | ,, | 1 |
| Oldham | ,, | 4 |
| Rochdale | ,, | 6 |
| Accrington | ,, | 1 |
| Burnley | ,, | 5 |
| Blackburn | ,, | 7 |
| Preston | ,, | 1 |
| Keighley | ,, | 2 |
| Huddersfield | ,, | 1 |
| Brighouse | ,, | 1 |
| Halifax | ,, | 8 |
| Bradford | ,, | 11 |

## List of Towns, &c.—Continued.

| Town. | Date. | Cases. |
|---|---|---|
| ls ..... | June 6 | 17 |
| ley..... | „ | 2 |
| rsbury..... | „ | 7 |
| kefield ..... | „ | 2 |
| ffield ..... | „ | 9 |
| k ..... | „ | 1 |
| gston-on-Hull. | „ | 1 |
| llesborough.. | „ | 2 |
| lington ..... | „ | 2 |
| derland ..... | „ | 2 |
| rcastle-on-Tyne | „ | 2 |
| liff ..... | „ | 10 |
| don ..... | „ | 23 |
| nester ..... | June 13 | 1 |
| ibridge ..... | „ | 1 |
| hester ..... | „ | 2 |
| tol ..... | „ | 1 |
| ley ..... | „ | 5 |
| t Bromwich.. | „ | 3 |
| ley ..... | „ | 3 |
| ntry ..... | „ | 1 |
| ester..... | „ | 6 |
| sfield ..... | „ | 1 |
| ter ..... | „ | 3 |
| enhead ..... | „ | 3 |
| le ..... | „ | 1 |
| rpool ..... | „ | 29 |
| on ..... | „ | 2 |
| worth ..... | „ | 3 |
| vood ..... | „ | 5 |
| hester ..... | „ | 9 |
| rd ..... | „ | 4 |
| on-u-Lyne .. | „ | 1 |
| leton..... | „ | 1 |
| am ..... | „ | 18 |
| dale ..... | „ | 4 |
| ley ..... | „ | 4 |
| kburn ..... | „ | 3 |
| ven..... | „ | 1 |
| rpool ..... | „ | 1 |
| lersfield .... | „ | 2 |
| house ..... | „ | 2 |
| ax ..... | „ | 14 |
| ford ..... | „ | 20 |
| ey ..... | „ | 1 |
| s ..... | „ | 23 |
| bury..... | „ | 3 |
| erham ..... | „ | 1 |
| ston-on-Hull. | „ | 2 |
| dlesbrough .. | „ | 1 |
| ngton ..... | „ | 6 |
| ton-on-Tees. | „ | 2 |
| shead ..... | „ | 3 |
| astle-on-Tyne | „ | 1 |
| ff ..... | „ | 2 |
| on ..... | „ | 9 |
| ton - on - mes..... | June 20 | 2 |

| Town, | Date. | Cases. |
|---|---|---|
| Harrow-on-Hill. | June 20 | 2 |
| Cambridge ..... | „ | 1 |
| Burslem ..... | „ | 1 |
| Hanley ..... | „ | 3 |
| West Bromwich.. | „ | 5 |
| Dudley ..... | „ | 1 |
| Birmingham .... | „ | 1 |
| Nuneaton and Chilvers Coton.. | „ | 1 |
| Coventry ..... | „ | 4 |
| Chester ..... | „ | 1 |
| Birkenhead ..... | „ | 1 |
| Wallasey ..... | „ | 1 |
| Bootle ..... | „ | 3 |
| Liverpool ..... | „ | 24 |
| Heywood ..... | „ | 2 |
| Manchester ..... | „ | 3 |
| Salford ..... | „ | 2 |
| Ashton-u-Lyne .. | „ | 5 |
| Middleton..... | „ | 2 |
| Oldham ..... | „ | 11 |
| Rochdale ..... | „ | 1 |
| Haslingden..... | „ | 1 |
| Rawtenstall .... | „ | 1 |
| Burnley ..... | „ | 4 |
| Blackburn ..... | „ | 1 |
| Halifax ..... | „ | 3 |
| Bradford ..... | „ | 8 |
| Leeds ..... | „ | 12 |
| Batley..... | „ | 1 |
| Dewsbury..... | „ | 7 |
| Sheffield ..... | „ | 1 |
| Kingston-on-Hull. | „ | 4 |
| Middlesbrough .. | „ | 5 |
| Darlington ..... | „ | 4 |
| Stockton..... | „ | 1 |
| West Hartlepool. | „ | 2 |
| Gateshead ..... | „ | 13 |
| Newcastle-on-Tyne | „ | 5 |
| Tynemouth ..... | „ | 1 |
| Cardiff ..... | „ | 1 |
| Aberystwith..... | „ | 1 |
| London ..... | „ | 14 |
| Hanley ..... | June 27 | 5 |
| West Bromwich.. | „ | 2 |
| Dudley ..... | „ | 4 |
| Smethwick ..... | „ | 2 |
| Birmingham .... | „ | 4 |
| Leicester..... | „ | 2 |
| Nottingham .... | „ | 4 |
| Stockport ..... | „ | 3 |
| Chester ..... | „ | 2 |
| Liverpool ..... | „ | 17 |
| Heywood ..... | „ | 7 |
| Manchester ..... | „ | 10 |
| Salford ..... | „ | 8 |
| Ashton-u-Lyne .. | „ | 3 |
| Oldham ..... | „ | 9 |

| Town. | Date. | Cases. |
|---|---|---|
| Rochdale ..... | June 27 | 1 |
| Burnley ..... | „ | 3 |
| Blackburn ..... | „ | 2 |
| Chorley ..... | „ | 1 |
| Todmorden ..... | „ | 1 |
| Huddersfield .... | „ | 9 |
| Halifax ..... | „ | 18 |
| Bradford ..... | „ | 14 |
| Leeds ..... | „ | 10 |
| Batley..... | „ | 1 |
| Dewsbury..... | „ | 6 |
| Wakefield ..... | „ | 1 |
| Kingston-on-Hull | „ | 3 |
| Darlington ..... | „ | 2 |
| Gateshead ..... | „ | 1 |
| Newcastle-on-Tyne | „ | 2 |
| Tynemouth ..... | „ | 1 |
| Cardiff ..... | „ | 3 |
| London ..... | „ | 9 |
| Colchester ..... | July 4 | 1 |
| Hanley ..... | „ | 5 |
| Stoke-on-Trent .. | „ | 1 |
| Dudley ..... | „ | 1 |
| Leicester..... | „ | 1 |
| Nottingham .... | „ | 2 |
| Chesterfield ..... | „ | 1 |
| Liverpool ..... | „ | 11 |
| Wigan ..... | „ | 2 |
| Farnworth ..... | „ | 3 |
| Bury ..... | „ | 1 |
| Heywood ..... | „ | 1 |
| Radcliffe..... | „ | 2 |
| Manchester ..... | „ | 9 |
| Salford ..... | „ | 2 |
| Ashton-u-Lyne. . | „ | 3 |
| Chadderton .... | „ | 1 |
| Oldham ..... | „ | 2 |
| Rochdale ..... | „ | 1 |
| Blackburn ..... | „ | 2 |
| Huddersfield .... | „ | 2 |
| Halifax ..... | „ | 7 |
| Bradford ..... | „ | 6 |
| Leeds ..... | „ | 4 |
| Batley..... | „ | 2 |
| Dewsbury..... | „ | 6 |
| Wakefield ..... | „ | 2 |
| Kingston-on-Hull. | „ | 4 |
| Darlington ..... | „ | 2 |
| Gateshead ..... | „ | 8 |
| Newcastle-on-Tyne | „ | 1 |
| London ..... | „ | 6 |
| Enfield ..... | July 11 | 1 |
| Cambridge ..... | „ | 2 |
| Hanley ..... | „ | 6 |
| Birmingham .... | „ | 1 |
| Leicester..... | „ | 3 |
| Lincoln ..... | „ | 1 |
| Nottingham .... | „ | 10 |

## List of Towns, &c.—Continued.

| Town | Date. | Cases. |
|---|---|---|
| Derby | July 11 | 1 |
| Stockport | ,, | 2 |
| Chester | ,, | 1 |
| Wallasey | ,, | 1 |
| Bootle | ,, | 1 |
| Liverpool | ,, | 43 |
| Warrington | ,, | 1 |
| Farnworth | ,, | 4 |
| Manchester | ,, | 2 |
| Salford | ,, | 3 |
| Ashton-u-Lyne | ,, | 1 |
| Stalybridge | ,, | 1 |
| Chadderton | ,, | 2 |
| Oldham | ,, | 5 |
| Rochdale | ,, | 1 |
| Burnley | ,, | 3 |
| Blackburn | ,, | 1 |
| Brighouse | ,, | 1 |
| Halifax | ,, | 4 |
| Bradford | ,, | 9 |
| Leeds | ,, | 7 |
| Batley | ,, | 4 |
| Dewsbury | ,, | 13 |
| Wakefield | ,, | 1 |
| York | ,, | 1 |
| Kingston-on-Hull. | ,, | 1 |
| Scarborough | ,, | 6 |
| Darlington | ,, | 3 |
| Gateshead | ,, | 6 |
| Newcastle-on-Tyne | ,, | 1 |
| Tynemouth | ,, | 1 |
| Pontypridd | ,, | 7 |
| London | ,, | 29 |
| Cambridge | July 18 | 48 |
| Leyton | ,, | 1 |
| Hanley | ,, | 3 |
| Dudley | ,, | 6 |
| Smethwick | ,, | 1 |
| Nottingham | ,, | 4 |
| Chesterfield | ,, | 1 |
| Chester | ,, | 1 |
| Liverpool | ,, | 13 |
| Ince-in-Makerfield | ,, | 1 |
| Wigan | ,, | 1 |
| Bolton | ,, | 1 |
| Bury | ,, | 1 |
| Heywood | ,, | 1 |
| Stretford | ,, | 2 |
| Manchester | ,, | 2 |
| Salford | ,, | 5 |
| Chadderton | ,, | 4 |
| Burnley | ,, | 1 |
| Huddersfield | ,, | 7 |
| Halifax | ,, | 13 |
| Bradford | ,, | 5 |
| Leeds | ,, | 6 |
| Batley | ,, | 3 |
| Dewsbury | ,, | 1 |

| Town. | Date. | Cases. |
|---|---|---|
| Sheffield | July 18 | 1 |
| Kingston-on-Hull. | ,, | 2 |
| Scarborough | ,, | 3 |
| Darlington | ,, | 1 |
| Stockton-on-Tees. | ,, | 1 |
| Sunderland | ,, | 1 |
| Gateshead | ,, | 1 |
| Newcastle-on-Tyne | ,, | 4 |
| Pontypridd | ,, | 1 |
| London | ,, | 6 |
| Willesden | July 25 | 1 |
| Cambridge | ,, | 28 |
| Bristol | ,, | 1 |
| Hanley | ,, | 4 |
| Leicester | ,, | 2 |
| Mansfield | ,, | 1 |
| Nottingham | ,, | 6 |
| Chesterfield | ,, | 1 |
| Chester | ,, | 4 |
| Liverpool | ,, | 11 |
| Bury | ,, | 2 |
| Heywood | ,, | 1 |
| Manchester | ,, | 7 |
| Ashton-u-Lyne | ,, | 1 |
| Chadderton | ,, | 1 |
| Oldham | ,, | 1 |
| Blackpool | ,, | 2 |
| Huddersfield | ,, | 2 |
| Halifax | ,, | 6 |
| Bradford | ,, | 8 |
| Leeds | ,, | 9 |
| Batley | ,, | 3 |
| Dewsbury | ,, | 4 |
| Barnsley | ,, | 1 |
| Kingston-on-Hull. | ,, | 3 |
| Scarborough | ,, | 3 |
| Darlington | ,, | 2 |
| Hebburn | ,, | 1 |
| Jarrow | ,, | 3 |
| Gateshead | ,, | 3 |
| Newcastle-on-Tyne | ,, | 6 |
| Pontypridd | ,, | 8 |
| London | ,, | 18 |
| Acton | Aug. 1 | 1 |
| Chiswick | ,, | 1 |
| Ealing | ,, | 6 |
| Cambridge | ,, | 24 |
| Hanley | ,, | 3 |
| Wolverhampton. | ,, | 1 |
| Dudley | ,, | 2 |
| Birmingham | ,, | 3 |
| Leicester | ,, | 2 |
| Mansfield | ,, | 1 |
| Nottingham | ,, | 6 |
| Hyde | ,, | 3 |
| Bootle | ,, | 2 |
| Liverpool | ,, | 1 |
| Widnes | ,, | 1 |

| Town. | Date. | Cases. |
|---|---|---|
| Stretford | Aug. 1 | 2 |
| Manchester | ,, | 3 |
| Salford | ,, | 2 |
| Rochdale | ,, | 3 |
| Blackpool | ,, | 1 |
| Lancaster | ,, | 1 |
| Keighley | ,, | 1 |
| Huddersfield | ,, | 2 |
| Halifax | ,, | 4 |
| Leeds | ,, | 1 |
| Batley | ,, | 1 |
| Dewsbury | ,, | 1 |
| Wakefield | ,, | 1 |
| Barnsley | ,, | 1 |
| Sheffield | ,, | 1 |
| Kingston-on-Hull | ,, | 1 |
| Jarrow | ,, | 1 |
| Gateshead | ,, | 1 |
| Newcastle-on-Tyne | ,, | 1 |
| Tynemouth | ,, | 1 |
| London | ,, | 1 |
| Ealing | Aug. 8 | 1 |
| Cambridge | ,, | 1 |
| Lowestoft | ,, | 1 |
| Smethwick | ,, | 1 |
| Leicester | ,, | 1 |
| Hyde | ,, | 2 |
| Chester | ,, | 2 |
| Liverpool | ,, | 6 |
| St. Helens | ,, | 8 |
| Bolton | ,, | 9 |
| Heywood | ,, | 3 |
| Chadderton | ,, | 4 |
| Oldham | ,, | 1 |
| Harrogate | ,, | 3 |
| Keighley | ,, | 3 |
| Halifax | ,, | 2 |
| Bradford | ,, | 1 |
| Shipley | ,, | 3 |
| Leeds | ,, | 3 |
| Batley | ,, | 6 |
| Barnsley | ,, | 8 |
| Sheffield | ,, | 18 |
| Kingston-on-Hull. | ,, | 1 |
| Darlington | ,, | 1 |
| Jarrow | ,, | 6 |
| Gateshead | ,, | 24 |
| Newcastle-on-Tyne | ,, | 3 |
| Pontypridd | ,, | 1 |
| London | ,, | 2 |
| Ealing | Aug. 15 | 3 |
| Torquay | ,, | 2 |
| Hanley | ,, | 1 |
| Burton-on-Trent | ,, | 6 |
| Wolverhampton | ,, | 3 |
| Dudley | ,, | 2 |
| Leicester | ,, | 1 |
| Chester | ,, | 1 |

## List of Towns, &c.—Continued.

| Town. | Date. | Cases. |
|---|---|---|
| llasey ..... | Aug. 15 | 1 |
| erpool ..... | „ | 8 |
| nworth ..... | „ | 3 |
| wood ..... | „ | 1 |
| nchester ..... | „ | 1 |
| dderton ..... | „ | 5 |
| caster ..... | „ | 3 |
| ghley..... | „ | 1 |
| ifax ..... | „ | 1 |
| dford ..... | „ | 8 |
| ds ..... | „ | 2 |
| ley..... | „ | 1 |
| wsbury..... | „ | 1 |
| xefield ..... | „ | 1 |
| nsley ..... | „ | 3 |
| gston-on-Hull. | „ | 2 |
| t Hartlepool.. | „ | 2 |
| derland ..... | „ | 1 |
| burn..... | „ | 2 |
| th Shields ... | „ | 1 |
| eshead ..... | „ | 2 |
| wcastle-on-Tyne | „ | 10 |
| emouth ..... | „ | 2 |
| ntain Ash .. | „ | 1 |
| ndon ..... | „ | 8 |
| ng ..... | Aug. 22 | 10 |
| esden ..... | „ | 1 |
| bridge ..... | „ | 5 |
| t Ham..... | „ | 1 |
| ton-on-Trent.. | „ | 10 |
| t Bromwich. . | „ | 1 |
| ley Regis ... | „ | 1 |
| entry ..... | „ | 1 |
| thwick ..... | „ | 2 |
| entry..... | „ | 1 |
| ester..... | „ | 2 |
| ster ..... | „ | 3 |
| rpool ..... | „ | 10 |
| Helens ..... | „ | 1 |
| nworth ..... | „ | 1 |
| wood ..... | „ | 2 |
| con-u-Lyne .. | „ | 1 |
| lderton ..... | „ | 2 |
| caster ..... | „ | 4 |
| ghley..... | „ | 3 |
| dersfield .... | „ | 1 |
| fax ..... | „ | 6 |
| lford ..... | „ | 10 |
| ls ..... | „ | 2 |
| ley..... | „ | 5 |
| rsbury..... | „ | 5 |
| nsley ..... | „ | 1 |
| field ..... | „ | 1 |
| borough .... | „ | 2 |
| llesbrough .. | „ | 1 |
| burn..... | „ | 1 |
| h Shields ... | „ | 2 |
| eshead ..... | „ | 3 |

| Town. | Dare. | Cases |
|---|---|---|
| Newcastle-on-Tyne | Aug. 22 | 5 |
| Tynemouth ..... | „ | 3 |
| Carlisle ..... | „ | 1 |
| Workington .... | „ | 1 |
| London ..... | „ | 15 |
| Ealing ..... | Aug. 29 | 3 |
| West Ham..... | „ | 1 |
| Torquay ..... | „ | 1 |
| Fenton ..... | „ | 1 |
| Hanley ..... | „ | 1 |
| Burton-on-Trent.. | „ | 2 |
| Dudley ..... | „ | 5 |
| Rowley Regis ... | „ | 1 |
| Smethwick ..... | „ | 4 |
| Leicester..... | „ | 1 |
| Glossop ..... | „ | 5 |
| Chester ..... | „ | 2 |
| Liverpool ..... | „ | 7 |
| Wigan ..... | „ | 1 |
| Bolton ..... | „ | 1 |
| Farnworth ..... | „ | 1 |
| Bury ..... | „ | 2 |
| Manchester ..... | „ | 1 |
| Rochdale ..... | „ | 2 |
| Nelson ..... | „ | 1 |
| Lancaster ..... | „ | 3 |
| Halifax ..... | „ | 2 |
| Bradford ..... | „ | 10 |
| Leeds ..... | „ | 20 |
| Batley..... | „ | 1 |
| Dewsbury..... | „ | 1 |
| York ..... | „ | 1 |
| Scarborough .... | „ | 3 |
| Darlington ..... | „ | 5 |
| West Hartlepool. . | „ | 1 |
| South Shields ... | „ | 4 |
| Gateshead ..... | „ | 1 |
| Newcastle-on-Tyne | „ | 11 |
| Tynemouth ..... | „ | 7 |
| Mountain Ash .. | „ | 2 |
| London ..... | „ | 10 |
| Ealing ..... | Sept. 5 | 2 |
| Willesden ..... | „ | 2 |
| Cambridge ..... | „ | 1 |
| West Ham..... | „ | 3 |
| Burton-on-Trent.. | „ | 1 |
| West Bromwich . | „ | 1 |
| Dudley ..... | „ | 1 |
| King's Norton and Northfield .... | „ | 1 |
| Smethwick ..... | „ | 1 |
| Birmingham .... | „ | 1 |
| Leicester..... | „ | 1 |
| Lincoln ..... | „ | 4 |
| Glossop ..... | „ | 12 |
| Chester ..... | „ | 1 |
| Wallasey ..... | „ | 1 |
| Liverpool ..... | „ | 5 |

| Town. | Date. | Cases. |
|---|---|---|
| Manchester ..... | Sept. 5 | 2 |
| Rochdale ..... | „ | 1 |
| Lancaster ..... | „ | 5 |
| Bradford ..... | „ | 4 |
| Leeds ..... | „ | 6 |
| Batley..... | „ | 1 |
| Dewsbury ..... | „ | 2 |
| Wakefield ..... | „ | 1 |
| York ..... | „ | 2 |
| Scarborough .... | „ | 1 |
| Darlington ..... | „ | 2 |
| South Shields ... | „ | 1 |
| Gateshead ..... | „ | 4 |
| Newcastle-on-Tyne | „ | 1 |
| Tynemouth ..... | „ | 16 |
| Penrith ..... | „ | 4 |
| Carlisle ..... | „ | 3 |
| Workington .... | „ | 1 |
| London ..... | „ | 9 |
| Cambridge ..... | Sept. 12 | 1 |
| Hanley ..... | „ | 5 |
| Burton-on-Trent.. | „ | 2 |
| Dudley ..... | „ | 5 |
| King's Norton and Northfield .... | „ | 2 |
| Smethwick ..... | „ | 3 |
| Birmingham .... | „ | 4 |
| Coventry ..... | „ | 3 |
| Leicester..... | „ | 4 |
| Lincoln ..... | „ | 2 |
| Glossop ..... | „ | 8 |
| Hyde..... | „ | 1 |
| Chester ..... | „ | 1 |
| Liverpool ..... | „ | 3 |
| Bolton ..... | „ | 2 |
| Farnworth ..... | „ | 2 |
| Chadderton ..... | „ | 2 |
| Bradford ..... | „ | 12 |
| Shipley ..... | „ | 2 |
| Leeds ..... | „ | 11 |
| Batley..... | „ | 1 |
| Dewsbury..... | „ | 1 |
| Wakefield ..... | „ | 1 |
| York ..... | „ | 4 |
| Scarborough .... | „ | 1 |
| Darlington ..... | „ | 12 |
| South Shields ... | „ | 1 |
| Newcastle-on-Tyne | „ | 5 |
| Tynemouth ..... | „ | 5 |
| Penrith ..... | „ | 5 |
| Aberystwith..... | „ | 1 |
| London ..... | „ | 6 |
| Ealing ..... | Sept. 19 | 1 |
| Hanley ..... | „ | 1 |
| Coseley ..... | „ | 1 |
| Dudley ..... | „ | 1 |
| Birmingham .... | „ | 6 |
| Coventry ..... | „ | 1 |

## List of Towns, &c.—Continued,

| Town. | Date. | Cases. |
|---|---|---|
| Leicester..... | Sept. 19 | 8 |
| Lincoln ..... | ,, | 2 |
| Liverpool ..... | ,, | 4 |
| Bolton ..... | ,, | 1 |
| Heywood ..... | ,, | 1 |
| Swinton and Pendlebury ... | ,, | 1 |
| Ashton-u-Lyne .. | ,, | 1 |
| Lancaster ..... | ,, | 1 |
| Halifax ..... | ,, | 1 |
| Bradford ..... | ,, | 3 |
| Shipley ..... | ,, | 1 |
| Leeds ..... | ,, | 9 |
| Dewsbury..... | ,, | 1 |
| Darlington ..... | ,, | 6 |
| Newcastle-on-Tyne | ,, | 6 |
| Tynemouth ..... | ,, | 4 |
| Penrith ..... | ,, | 4 |
| Carlisle ..... | ,, | 1 |
| Workington .... | ,, | 2 |
| Ambleside ..... | ,, | 1 |
| London ..... | ,, | 6 |
| Burslem ..... | Sept. 26 | 1 |
| Hanley ..... | ,, | 2 |
| Stoke-on-Trent .. | ,, | 1 |
| Burton-on-Trent | ,, | 1 |
| Dudley ..... | ,, | 1 |
| Smethwick ..... | ,, | 2 |
| Birmingham .... | ,, | 9 |
| Coventry ..... | ,, | 2 |
| Leicester..... | ,, | 6 |
| Stockport ..... | ,, | 1 |
| Chorley ..... | ,, | 23 |
| Halifax ..... | ,, | 1 |
| Bradford ..... | ,, | 5 |
| Leeds ..... | ,, | 15 |
| Dewsbury..... | ,, | 2 |
| Wakefield ..... | ,, | 1 |
| Doncaster..... | ,, | 3 |
| Darlington ..... | ,, | 2 |
| Hebburn..... | ,, | 1 |
| Gateshead ..... | ,, | 1 |
| Newcastle-on-Tyne | ,, | 5 |
| Tynemouth .... | ,, | 8 |
| Penrith ..... | ,, | 2 |
| Carlisle ..... | ,, | 1 |
| Workington .... | ,, | 1 |
| Aberystwith..... | ,, | 1 |
| London ..... | ,, | 2 |
| Burslem ..... | Oct. 3 | 1 |
| Burton-on-Trent.. | ,, | 6 |
| Birmingham .... | ,, | 9 |
| Coventry ..... | ,, | 1 |
| Leicester..... | ,, | 1 |
| Liverpool ..... | ,, | 7 |
| Manchester ..... | ,, | 2 |
| Blackburn ..... | ,, | 1 |
| Chorley ..... | ,, | 7 |

| Town. | Date. | Cases. |
|---|---|---|
| Bradford ..... | Oct. 3 | 3 |
| Leeds ..... | ,, | 5 |
| Dewsbury..... | ,, | 2 |
| Doncaster..... | ,, | 1 |
| York ..... | ,, | 1 |
| Darlington ..... | ,, | 1 |
| Gateshead ..... | ,, | 4 |
| Newcastle-on-Tyne | ,, | 5 |
| Penrith ..... | ,, | 6 |
| Carlisle ..... | ,, | 4 |
| Workington .... | ,, | 2 |
| Whitehaven .... | ,, | 1 |
| London ..... | ,, | 1 |
| Burslem ..... | Oct. 10 | 1 |
| Hanley ..... | ,, | 1 |
| Dudley ..... | ,, | 1 |
| Birmingham .... | ,, | 6 |
| Coventry ..... | ,, | 2 |
| Lincoln ..... | ,, | 2 |
| Liverpool ..... | ,, | 3 |
| Wigan ..... | ,, | 1 |
| Bolton ..... | ,, | 1 |
| Manchester ..... | ,, | 2 |
| Salford ..... | ,, | 4 |
| Chorley ..... | ,, | 3 |
| Preston ..... | ,, | 1 |
| Halifax ..... | ,, | 1 |
| Bradford ..... | ,, | 2 |
| Leeds ..... | ,, | 4 |
| Batley..... | ,, | 1 |
| Doncaster..... | ,, | 1 |
| Darlington ..... | ,, | 3 |
| Gateshead ..... | ,, | 1 |
| Newcastle-on-Tyne | ,, | 4 |
| Tynemouth ..... | ,, | 2 |
| Penrith ..... | ,, | 1 |
| Carlisle ..... | ,, | 1 |
| Workington ... | ,, | 4 |
| London ..... | ,, | 2 |
| Gloucester ..... | Oct. 17 | 3 |
| Burslem ..... | ,, | 5 |
| West Bromwich . | ,, | 1 |
| King's Norton and Northfield .... | ,, | 1 |
| Birmingham .... | ,, | 1 |
| Coventry ..... | ,, | 1 |
| Glossop ..... | ,, | 3 |
| Stockport ..... | ,, | 1 |
| Liverpool ..... | ,, | 2 |
| Bury ..... | ,, | 1 |
| Gorton ..... | ,, | 4 |
| Manchester ..... | ,, | 5 |
| Lancaster ..... | ,, | 1 |
| Bradford ..... | ,, | 2 |
| Batley..... | ,, | 1 |
| Wakefield ..... | ,, | 1 |
| Doncaster..... | ,, | 1 |
| York ..... | ,, | 12 |

| Town. | Date. | Ca |
|---|---|---|
| Darlington ..... | Oct. 17 | |
| Gateshead ..... | ,, | |
| Newcastle-on-Tyne | ,, | |
| Tynemouth ..... | ,, | |
| Carlisle ..... | ,, | |
| Barry ..... | ,, | |
| London ..... | ,, | |
| West Ham..... | Oct. 24 | |
| King's Norton and Northfield .... | ,, | |
| Coventry ..... | ,, | |
| Leicester..... | ,, | |
| Stockport ..... | ,, | |
| Liverpool ..... | ,, | |
| Wigan ..... | ,, | |
| Farnworth ..... | ,, | |
| Gorton ..... | ,, | |
| Manchester ..... | ,, | |
| Blackburn ..... | ,, | |
| Bradford ..... | ,, | |
| Leeds ..... | ,, | |
| Sheffield ..... | ,, | |
| York ..... | ,, | |
| South Shields ... | ,, | |
| Newcastle-on-Tyne | ,, | |
| Tynemouth ..... | ,, | |
| Penrith ..... | ,, | |
| Carlisle ..... | ,, | |
| London ..... | ,, | |
| West Bromwich. . | Oct. 31 | |
| Smethwick ..... | ,, | |
| Coventry ..... | ,, | |
| Leicester..... | ,, | |
| Glossop ..... | ,, | |
| Wigan ..... | ,, | |
| Gorton ..... | ,, | |
| Manchester ..... | ,, | |
| Salford ..... | ,, | |
| Chorley ..... | ,, | |
| Batley..... | ,, | |
| Wakefield ..... | ,, | |
| Stockton-on-Tees. | ,, | |
| Jarrow ..... | ,, | |
| Gateshead ..... | ,, | |
| Newcastle-on-Tyne | ,, | |
| Tynemouth ..... | ,, | |
| Carlisle ..... | ,, | |
| London ..... | ,, | |
| Burslem ..... | Nov. 7 | |
| Glossop ..... | ,, | |
| Wigan ..... | ,, | |
| Manchester ..... | ,, | |
| Blackburn ..... | ,, | |
| Blackpool ..... | ,, | |
| Halifax ..... | ,, | |
| Rotherham ..... | ,, | |
| Doncaster..... | ,, | |
| Gateshead ..... | ,, | |

## List of Towns, &c.—Continued.

| Town. | Date. | Cases. |
|---|---|---|
| wcastle-on-Tyne | Nov, 7 | 6 |
| nemouth ..... | „ | 2 |
| nrith ..... | „ | 1 |
| rlisle ..... | „ | 1 |
| ndon ..... | „ | 6 |
| ttenham ..... | Nov. 14 | 2 |
| nbridge ..... | „ | 1 |
| lbury ..... | „ | 1 |
| ethwick ..... | „ | 2 |
| ttingham .... | „ | 4 |
| rton ..... | „ | 1 |
| nton-u-Lyne .. | „ | 2 |
| ckpool ..... | „ | 1 |
| rrow-in-Furness | „ | 1 |
| kefield ..... | „ | 1 |
| wcastle-on-Tyne | „ | 18 |
| nemouth ..... | „ | 3 |
| rlisle ..... | „ | 6 |
| rkington .... | „ | 1 |
| ndon ..... | „ | 16 |
| tford ..... | Nov. 21 | 1 |
| nbridge ..... | „ | 2 |
| lbury ..... | „ | 1 |
| neaton and Chilvers Coton.. | „ | 1 |
| ventry ..... | „ | 1 |
| rrington ..... | „ | 6 |
| nton-u-Lyne .. | „ | 2 |
| ckburn ..... | „ | 1 |
| ncaster ..... | „ | 1 |
| kefield ..... | „ | 2 |
| bburn..... | „ | 1 |
| teshead ..... | „ | 1 |
| wcastle-on-Tyne | „ | 2 |
| nemouth ..... | „ | 10 |
| nrith ..... | „ | 1 |
| rlisle ..... | „ | 4 |
| ndon ..... | „ | 7 |
| ttenham ..... | Nov. 28 | 1 |
| st Ham..... | „ | 1 |
| rmingham .... | „ | 6 |
| ttingham .... | „ | 2 |
| rrington ..... | „ | 7 |
| nchester ..... | „ | 4 |
| nton-u-Lyne .. | „ | 1 |
| ddleton..... | „ | 1 |

| Town. | Date. | Cases. |
|---|---|---|
| Chorley ..... | Nov. 28 | 1 |
| York ..... | „ | 1 |
| Sunderland ..... | „ | 1 |
| Gateshead ..... | „ | 6 |
| Newcastle-on-Tyne | „ | 1 |
| Tynemouth ..... | „ | 3 |
| Carlisle ..... | „ | 3 |
| London ..... | „ | 4 |
| Southampton.... | Dec. 5 | 1 |
| Newcastle-u-Lyme | „ | 1 |
| Burton-on-Trent.. | „ | 1 |
| Birmingham .... | „ | 3 |
| Nottingham .... | „ | 3 |
| Chesterfield ..... | „ | 1 |
| Wallasey ..... | „ | 1 |
| Warrington .... | „ | 34 |
| Ashton-u-Lyne .. | „ | 1 |
| Chadderton ..... | „ | 10 |
| Halifax ..... | „ | 1 |
| Bradford ..... | „ | 1 |
| Doncaster..... | „ | 1 |
| Hebburn..... | „ | 1 |
| Jarrow ..... | „ | 2 |
| Gateshead ..... | „ | 8 |
| Tynemouth ..... | „ | 3 |
| Carlisle ..... | „ | 2 |
| London ..... | „ | 2 |
| Portsmouth ..... | Dec. 12 | 1 |
| Edmonton ..... | „ | 1 |
| Birmingham .... | „ | 2 |
| Nuneaton and Chilvers Norton | „ | 2 |
| Leicester..... | „ | 3 |
| Lincoln ..... | „ | 3 |
| Nottingham .... | „ | 1 |
| Warrington ..... | „ | 3 |
| Manchester ..... | „ | 2 |
| Chadderton ..... | „ | 1 |
| Middleton..... | „ | 1 |
| Halifax ..... | „ | 4 |
| Hartlepool ..... | „ | 1 |
| York ..... | „ | 1 |
| Hebburn..... | „ | 1 |
| Gateshead ..... | „ | 12 |
| Newcastle-on-Tyne | „ | 1 |
| Tynemouth ..... | „ | 11 |

| Town. | Date. | Cases. |
|---|---|---|
| Carlisle ..... | Dec. 12 | 1 |
| London ..... | „ | 4 |
| Gillingham ..... | Dec. 19 | 1 |
| Hove ..... | „ | 1 |
| West Ham..... | „ | 2 |
| King's Norton and Northfield .... | „ | 1 |
| Birmingham .... | „ | 1 |
| Nottingham .... | „ | 10 |
| Hyde..... | „ | 2 |
| Wallasey ..... | „ | 1 |
| Liverpool ..... | „ | 1 |
| Warrington ..... | „ | 10 |
| Bolton ..... | „ | 1 |
| Stretford ..... | „ | 1 |
| Manchester ..... | „ | 4 |
| Ashton-u-Lyne .. | „ | 1 |
| Chadderton ..... | „ | 2 |
| Oldham ..... | „ | 2 |
| Hebburn..... | „ | 1 |
| Gateshead ..... | „ | 17 |
| Newcastle-on-Tyne | „ | 5 |
| Tynemouth ..... | „ | 5 |
| Penrith ..... | „ | 1 |
| Carlisle ..... | „ | 1 |
| Workington .... | „ | 1 |
| London ..... | „ | 4 |
| West Ham..... | Dec. 26 | 2 |
| Kidderminster .. | „ | 1 |
| Loughborough .. | „ | 4 |
| Nottingham .... | „ | 1 |
| Warrington ..... | „ | 7 |
| Bolton ..... | „ | 2 |
| Eccles ..... | „ | 1 |
| Manchester ..... | „ | 2 |
| Salford ..... | „ | 1 |
| Ashton-u-Lyne .. | „ | 6 |
| Chadderton ..... | „ | 1 |
| Nelson ..... | „ | 1 |
| York ..... | „ | 2 |
| Hartlepool ..... | „ | 1 |
| Sunderland ..... | „ | 4 |
| Hebburn..... | „ | 1 |
| Gateshead ..... | „ | 9 |
| Newcastle-on-Tyne | „ | 1 |
| Tynemouth ..... | „ | 11 |
| London ..... | „ | 8 |

# CHICKEN POX.

On the 26th of January, Dr. Johnstone, Local Government Board Inspector, came down to see what arrangements we had made and were making in reference to the outbreak, and he recommended that for a period of six months Chicken Pox should be reported by the medical practitioners. I asked the sanction of the Sanitary Committee for this permission, and this was readily granted. The visiting of these cases entailed some time, but it was a wise provision, for the purpose of preventing Small Pox being overlooked.

Chicken Pox is not now notifiable.

The following are the dates and houses in which Chicken Pox was reported.

PARTICULARS OF CHICKEN POX CASES.

| No. | 1903, Month. | Address. |
|---|---|---|
| 1 | January 30th ..... | 20, Stanley Street. |
| 2 | „ ..... | 3, Sutton Mill Common. |
| 3 | February 3rd ..... | 13, Delph Street. |
| 4 | „ 4th ..... | 398, Woodhouse Lane. |
| 5 | January 30th ..... | 1, Layland Street. |
| 6 | February 2nd ..... | 224, Woodhouse Lane. |
| 7 | „ 6th ..... | 18, Walmer Street. |
| 8 | „ 6th ..... | „ „ |
| 9 | „ 6th ..... | 1, Greenough's Row. |
| 10 | „ 6th ..... | 174, Woodhouse Laue. |
| 11 | „ 11th ..... | 1, Railway Street. |
| 12 | „ 10th ..... | 11, Kirkless Street. |
| 13 | „ 11th ..... | 22, Longshoot. |
| 14 | „ 14th ..... | 3, Fleming's Yard, Hallgate. |
| 15 | „ 16th ..... | 1, Hunt Street. |
| 16 | „ 17th ..... | 398, Woodhouse Lane. |
| 17 | „ 18th ..... | 27, Hallgate. |
| 18 | „ 20th ..... | 16, Ormandy's Houses. |
| 19 | „ 16th ..... | 3, Coop Street. |
| 20 | „ 16th ..... | „ „ |
| 21 | „ 16th ..... | „ „ |
| 22 | „ 20th ..... | 11, Hambleton Street. |
| 23 | „ 20th ..... | 3, Tichborne Street. |
| 24 | „ 20th ..... | „ „ |
| 25 | March 5th..... | 7, Stanley Street. |
| 26 | „ 5th..... | 11, Layland Street. |
| 27 | „ 5th..... | „ „ |
| 28 | „ 5th..... | „ „ |
| 29 | „ 12th..... | 71, Byrom Street. |
| 30 | „ 14th..... | 2, Jane Street. |
| 31 | „ 16th..... | 14, Folly. |

## Particulars of Chicken Pox Cases.—(Continued.)

| No. | 1903. Month. | Address. |
|---|---|---|
| 32 | March 16th | 14, Folly. |
| 33 | „ 16th | 4, Milton Street. |
| 34 | „ 16th | 11, Florence Street (Small Pox). |
| 35 | „ 17th | 96, Scholefield Lane. |
| 36 | „ 17th | 47, Cambridge Street. |
| 37 | „ 21st | 79a, Scholefield Lane. |
| 38 | „ 24th | 2, Heaton's Yard, Cross Street, |
| 39 | „ 25th | 2, Bridgeman Street. |
| 40 | „ 26th | 2, Hilton's Yard. |
| 41 | „ 27th | 14, Whelley. |
| 42 | „ 28th | 3, Sovereign Road. |
| 43 | „ 31st | 66, Brookhouse Street. |
| 44 | April 3rd | 15, Earl Street. |
| 45 | „ 7th | 73, Great George Street. |
| 46 | „ 13th | 2, Dicconson Terrace. |
| 47 | „ 13th | 3, Sovereign Road. |
| 48 | „ 18th | 13, Horsefield Street. |
| 49 | „ 20th | 39, Hodges Street. |
| 50 | „ 27th | 133, Wallgate. |
| 51 | „ 25th | 27, Driving Lane. |
| 52 | May 1st | 38, Great George Street. |
| 53 | „ 5th | 50, Lower Morris Street. |
| 54 | „ 19th | 10, Fowden Street. |
| 55 | „ 21st | 10, Harrison's Square. |
| 56 | June 11th | 33, Wood Street. |
| 57 | „ 15th | Spencer Road. |
| 58 | „ 20th | 1, Crawford Terrace. |
| 59 | „ 30th | 34, Queen Street. |
| 60 | „ 30th | 8, Ardern Street. |
| 61 | July 2nd | 1, Ball Street. |
| 62 | „ 11th | 27, Prescott Street. |
| 63 | August 4th | 106, Great George Street. |
| 64 | „ 29th | 36, Bold Street. |
| 65 | „ 31st | „ „ |
| 66 | September 7th | Oakdene, Trafalgar Road. |
| 67 | „ 7th | „ „ |
| 68 | „ 7th | „ „ |
| 69 | October 19th | 10, Johnson Street. |
| 70 | „ 20th | 98, Caroline Street. |

The Total Number of Cases Notified was 70.

| 1903. Month. | Cases. | 1903. Month. | Cases. |
|---|---|---|---|
| January | 3 | July | 2 |
| February | 21 | August | 3 |
| March | 19 | September | 3 |
| April | 8 | October | 2 |
| May | 4 | | |
| June | 5 | | 70 |

# SCARLET FEVER.

| | |
|---|---|
| Number of Notifications ..... | 362 |
| Number of Deaths ..... | 26 |
| Death-rate per 1,000 of population ..... | ·41 |

The number of notifications of this disease is for 1903, 362, against 557 in 1902; and 26 deaths, against 33 in 1902.

| | Notifications | Removed to Sanatorium. | Deaths. |
|---|---|---|---|
| January ..... | 50 | 18 | 2 |
| February ..... | 19 | 12 | 5 |
| March ..... | 31 | 18 | 1 |
| April ..... | 35 | 20 | 1 |
| May ..... | 39 | 20 | 4 |
| June ..... | 30 | 20 | 3 |
| July ..... | 19 | 15 | 2 |
| August ..... | 21 | 16 | 1 |
| September ..... | 26 | 18 | 1 |
| October ..... | 29 | 14 | 1 |
| November ..... | 24 | 11 | 5 |
| December ..... | 39 | 23 | — |
| Total ..... | 362 | 205 | 26 |

The percentage of removals to Sanatorium has been 56·63, against 44·16 in 1902, and 59·46 in 1901.

We have had 20 return cases during the year, and although such cases are to be deplored, they are unavoidable at times; the utmost care has been taken before discharging the convalescent patients, and we have a suspicion that the stoving of the houses and disinfection of the bedding and clothing was sometimes at fault.

## Borough of Wigan.

Notification of disease adopted March, 1889. Hospital opened 1891.

### SCARLET FEVER.

| Year. | Estim. Population. | Cases Notified. | Under Five Years. | Deaths. | Cases in Hospital. | Attacks per 1,000. | Deaths per 1,000. | Per cent. per Annum. |
|---|---|---|---|---|---|---|---|---|
| 1889 | 53916 | 182 | 76 | 23 | 15 | 3·37 | ·42 | 8·24 |
| 1890 | 54440 | 235 | 163 | 29 | 83 | 4·31 | ·42 | 35·31 |
| 1891 | 55084 | 278 | 198 | 28 | 150 | 6·86 | ·50 | 39·68 |
| 1892 | 56040 | 218 | 117 | 10 | 79 | 3·89 | ·17 | 36·69 |
| 1893 | 57483 | 336 | 211 | 45 | 183 | 5·84 | ·78 | 54·49 |
| 1894 | 58529 | 361 | 215 | 15 | 200 | 6·16 | ·25 | 55·40 |
| 1895 | 59469 | 157 | 84 | 5 | 92 | 2·64 | ·08 | 58 59 |
| 1896 | 60235 | 151 | 83 | 8 | 43 | 2·50 | ·13 | 28·47 |
| 1897 | 61202 | 191 | 84 | 10 | 95 | 3·12 | ·16 | 49·74 |
| 1898 | 61697 | 420 | 220 | 22 | 189 | 6·80 | ·35 | 45·00 |
| 1899 | 62630 | 245 | 129 | 19 | 142 | 3·91 | ·30 | 57·95 |
| 1900 | 63440 | 485 | 159 | 21 | 211 | 7·63 | 33 | 42·59 |
| 1901 | 60923 | 264 | 92 | 16 | 155 | 4·00 | ·26 | 58·70 |
| 1902 | 61827 | 557 | 190 | 33 | 246 | 9·00 | ·53 | 44·16 |
| 1903 | 62689 | 362 | 119 | 26 | 205 | 5·77 | ·41 | 56·63 |

# AGE INCIDENCES OF SCARLET FEVER.

| Ages | Months. 0-3 | 3-6 | 6-9 | 9-12 | Years. 1-2 | 2-3 | 3-4 | 4-5 | 5-6 | 6-7 | 7-8 | 8-9 | 9-10 | 10-15 | 15-20 | 20 & over. | Total. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Total Number of Notifications | 1 | 0 | 1 | 2 | 13 | 30 | 33 | 34 | 41 | 39 | 35 | 30 | 24 | 54 | 11 | 14 | 362 |
| Under 1 year | 4 | | | | | | | | | | | | | | | | |
| From 1 to 5 years | | | | | 110 | | | | | | | | | | | | |
| „ 5 to 10 years | | | | | | | | | | | 169 | | | | | | |
| Over 15 years | | | | | | | | | | | | | | | 79 | | |
| Sickness rate per 1,000 of the Population at each age | ·01 | — | ·01 | ·03 | ·20 | ·47 | ·52 | ·54 | ·65 | ·62 | ·55 | ·47 | ·38 | ·86 | ·17 | ·22 | 5·77 |
| Deaths at different ages | 0 | 0 | 0 | 0 | 3 | 6 | 6 | 6 | 2 | 1 | 0 | 1 | 0 | 0 | 0 | 1 | 26 |
| Percentage Mortality | 0 | 0 | 0 | 0 | 23·07 | 20·00 | 18·18 | 17·64 | 4·87 | 2·56 | 0 | 3·33 | 0 | 0 | 0 | 7·14 | 7·18 |
| All under 1 year | 0 | | | | | | | | | | | | | | | | |

# MEASLES.

Measles, I regret to say, after being endemic the whole of the year 1902, became in January, 1903, epidemic, for in December, 1902, we had only 31 notifications, which rose to 161 in January; the epidemic continued in full force till June, when the number dropped from 251 in May to 86 in June, and after this we had a gradual fall till we had only one in December.

Measles reappear with us biennially, that is every two years, and if this reappearance takes place in the winter months we get a larger death-rate from complications.

The total number of cases notified for 1903, was 1,456, against 291 cases in 1902. Of these 1,015 were notified by medical men, and 441, the remainder, discovered by the inspectors when inquiring into the notified cases.

The deaths numbered 104, or a rate of 1·86 per 1,000 of the population, or a percentage mortality of 7·14, against 6·87 in my last report, and 3·03 per cent. in 1901. This shows that in epidemic cycles the percentage of deaths vary according to the period of the year.

The following is a list of voluntary notifications and other cases discovered in consequence:—

VOLUNTARY NOTIFICATIONS OF MEASLES IN 1903.

| | Notifications. | Deaths. |
|---|---|---|
| January | 161 | 7 |
| February | 251 | 17 |
| March | 323 | 21 |
| April | 297 | 22 |
| May | 251 | 22 |
| June | 86 | 11 |
| July | 16 | 3 |
| August | 8 | 1 |
| September | 13 | — |
| October | 38 | — |
| November | 11 | — |
| December | 1 | — |
| Total | 1456 | 104 |

School closure did not have the same beneficial effects as were noticeable in previous epidemics; this was owing mainly to the delay which took place in enforcing the order of the Sanitary Committee.

My report to the Local Government Board on the epidemic of 1903 will be found in Appendix I.

## WHOOPING COUGH.

The number of deaths from Whooping Cough is 28, against 37 in 1902, and 40 in 1901. The number is shown in the following table :—

| | Deaths in 1903. | Deaths in 1902. |
|---|---|---|
| January | 3 | 1 |
| February | 2 | ... |
| March | 4 | ... |
| April | ... | 2 |
| May | 2 | 2 |
| June | ... | 14 |
| July | 1 | 1 |
| August | 2 | 4 |
| September | 2 | 6 |
| October | 3 | 2 |
| November | 2 | 3 |
| December | 7 | 2 |
| Total | 28 | 37 |

The deaths were fewer in 1903 by 9, nevertheless it is a very dangerous disease owing to the lung affections which supervene.

The Committee agreed on January 15, 1903, to a system of voluntary notification from the head teachers in schools, but the notifications sent in were so few that they were of no use to the Sanitary Authority.

## TYPHUS FEVER.

I am pleased to say we have had no notifications of this disease during the past year.

## ENTERIC FEVER.

| | |
|---|---|
| Number of notifications | 51 |
| Number of deaths | 11 |
| Mortality per 1,000 of population | 17 |
| Removed to the Sanatorium | 34 |

We have for 1903 51 notifications, against 76 in 1902, and 71 in 1901. A few of the cases removed to the Sanatorium turned out to be cases of other febrile diseases.

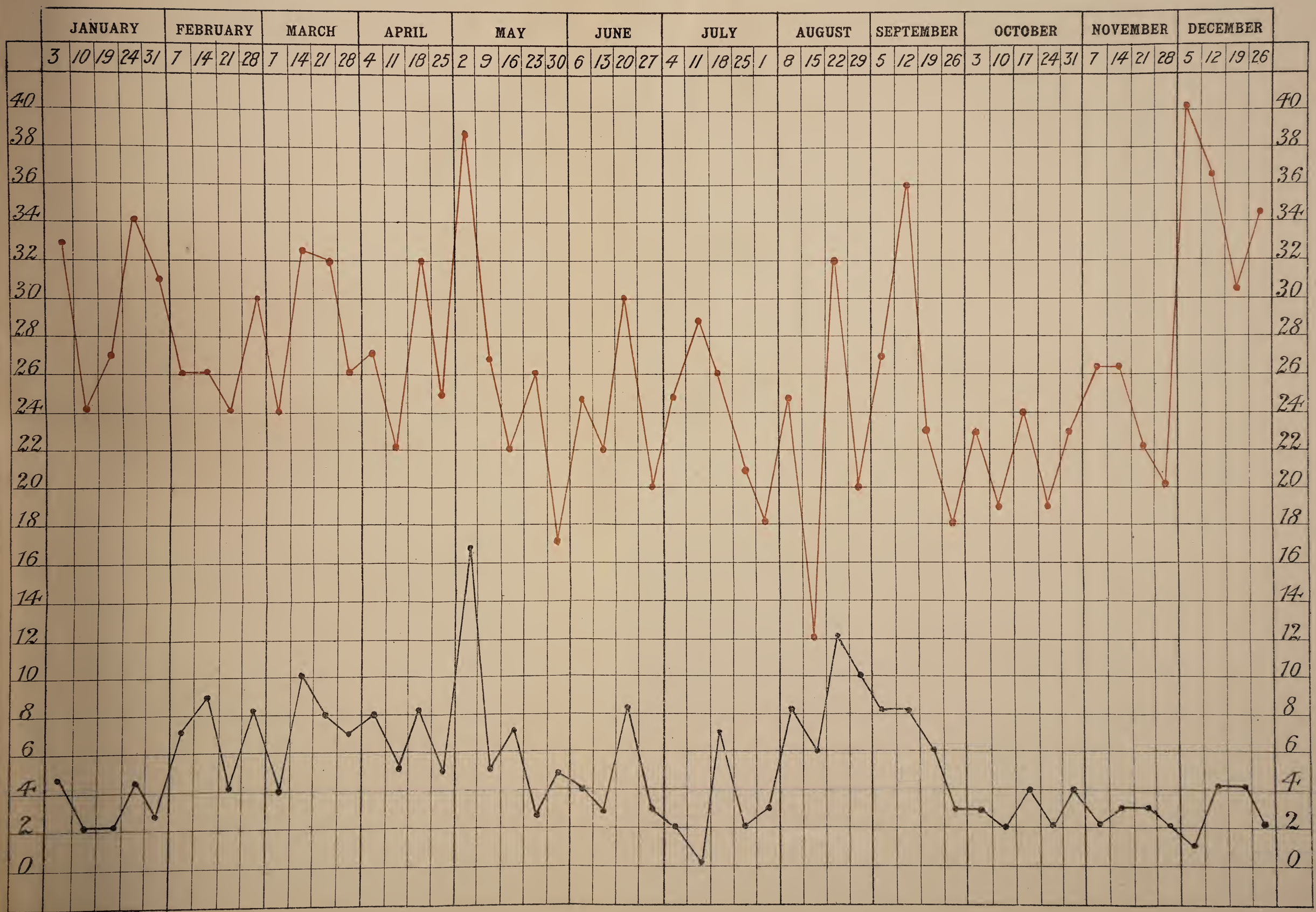
The number of deaths were 11, or 21·56 per cent. of the cases notified, against a rate of 18·42 per cent. in 1902, and 16·90 per cent. in 1901.

# DEATH RETURNS CHART I.

## 1903.

All Causes (Red)

Zymotics (Black)



The percentage of deaths was greater, on account of the severe type of the disease, and probably also for the want of early removal in some of the cases.

The cases were notified as follows:—

| | Notifications. | Removed to Sanatorium. | Deaths, 1903. |
|---|---|---|---|
| January | 7 | 2 | 2 |
| February | 2 | 1 | ... |
| March | 6 | 2 | 1 |
| April | 10 | 7 | 2 |
| May | 4 | 2 | 3 |
| June | 3 | 1 | 1 |
| July | 2 | 2 | ... |
| August | 1 | ... | ... |
| September | 4 | 5 | ... 3 Aspull |
| October | 5 | 8 | ... 5 „ |
| November | 2 | 1 | 1 |
| December | 5 | 3 | 1 1 „ |
| Total | 51 | 34 | 11 |

In the Thompson Yates Laboratory, Liverpool, we have had six specimens of blood examined, with the following results:—

| | |
|---|---|
| Positive reaction | 2 |
| Negative | 4 |

I may say that some of these cases were not notified as Enteric Fever, but the blood was examined because of suspicion.

The disease was not at any time epidemic; generally, however, some sanitary defect was found to exist excepting where we had reason to suspect that the disease was imported.

The age incidence for 1903 was as follows:—

| | |
|---|---|
| 1— 4 | 2 |
| 5— 9 | 6 |
| 10—14 | 7 |
| 15—19 | 3 |
| 20—24 | 5 |
| 25—29 | 9 |
| Over 30 | 19 |
| | 51 |

The following is a list of the streets in which Enteric Fever occurred :—

| | Cases. | | Cases. |
|---|---|---|---|
| Ashton's Yard, Princess Street | 1 | Miry Lane | 1 |
| Ashland Avenue | 1 | Ormandy's Houses | 1 |
| Acton Street | 1 | Pool Street | 1 |
| Anderton Street | 1 | Portland Street | 2 |
| Brook Street | 1 | Park Road | 1 |
| Byron Street | 1 | Poolstock | 1 |
| Baldwin Street | 1 | Russell Street | 1 |
| Corporation Street | 4 | Swan Terrace | 1 |
| Clayton Street | 1 | Standishgate | 2 |
| Dickinson's Yard, Lyon Street | 1 | Swift's Yard, Millgate | 1 |
| Dicconson Terrace | 1 | Shaw Street | 1 |
| Fairclough Street | 1 | Spring Street | 1 |
| Gidlow Lane | 1 | Vitriol Fold | 1 |
| Higham Street | 1 | Whittaker's Yard, Wigan Lane | 3 |
| Howard's Yard, Clayton Street | 1 | Workhouse | 1 |
| Hardybutts | 1 | Warrington Lane | 2 |
| Hilton's Yard, Douglas Street | 1 | Wallgate | 1 |
| Hallgate | 1 | William Street | 1 |
| Infirmary | 1 | Wigan Lane | 3 |
| Kirkless Street | 1 | | |
| Leader Street | 1 | | |
| Lime Street | 2 | | 51 |
| Milton Street | 1 | | |

## DIARRHŒA.

Number of deaths ..... 78
Mortality of population ..... 1·24

We have an increase in the number of deaths from Diarrhœa. In 1902 we had 57 deaths, or ·92 to 1,000 of the population; against 78, or 1·24 in 1903.

| | Deaths. | 0-1 Year. | 1-5 Years. | Over 5 Years |
|---|---|---|---|---|
| January | 1 | 1 | ... | ... |
| February | ... | ... | ... | ... |
| March | 1 | ... | 1 | ... |
| April | ... | ... | ... | ... |
| May | 1 | 2 | ... | ... |
| June | 3 | 1 | ... | 1 |
| July | 4 | 6 | ... | ... |
| August | 31 | 27 | 8 | ... |
| September | 22 | 13 | 5 | 1 |
| October | 11 | 3 | 5 | 1 |
| November | 2 | 1 | ... | ... |
| December | 2 | ... | 2 | ... |
| Total | 78 | 54 | 21 | 3 |

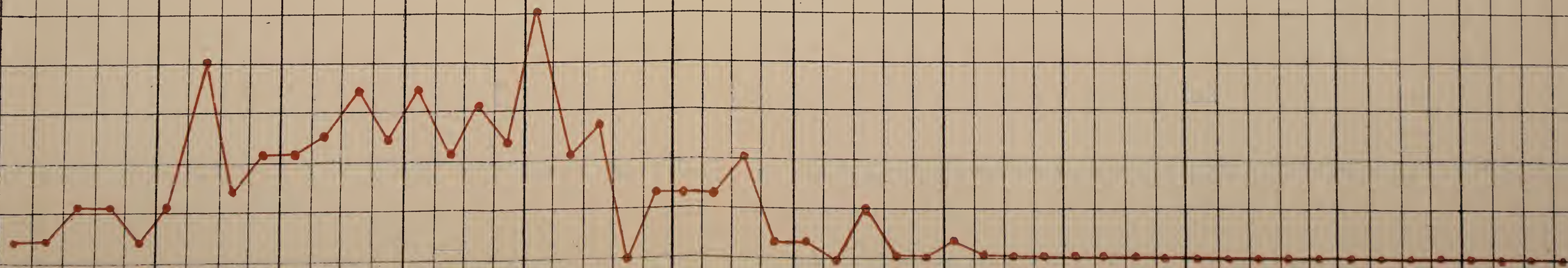
# DEATH RETURNS CHART II.

## 1903.

### Measles (Red)

| JANUARY | | | | | FEBRUARY | | | | MARCH | | | | APRIL | | | | MAY | | | | | JUNE | | | | JULY | | | | | AUGUST | | | | SEPTEMBER | | | | OCTOBER | | | | | NOVEMBER | | | | DECEMBER | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | 10 | 19 | 24 | 31 | 7 | 14 | 21 | 28 | 7 | 14 | 21 | 28 | 4 | 11 | 18 | 25 | 2 | 9 | 16 | 23 | 30 | 6 | 13 | 20 | 27 | 4 | 11 | 18 | 25 | 1 | 8 | 15 | 22 | 29 | 5 | 12 | 19 | 26 | 3 | 10 | 17 | 24 | 31 | 7 | 14 | 21 | 28 | 5 | 12 | 19 | 26 |

40
38
36
34
32
30
28
26
24
22
20
18
16
14
12
10
8
6
4
2
0



# DEATH RETURNS CHART III.

1903.

## Whooping Cough (Black)

| | JANUARY | | | | | FEBRUARY | | | | MARCH | | | | APRIL | | | | MAY | | | | | JUNE | | | | JULY | | | | | AUGUST | | | | SEPTEMBER | | | | OCTOBER | | | | | NOVEMBER | | | | DECEMBER | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 3 | 10 | 19 | 24 | 31 | 7 | 14 | 21 | 28 | 7 | 14 | 21 | 28 | 4 | 11 | 18 | 25 | 2 | 9 | 16 | 23 | 30 | 6 | 13 | 20 | 27 | 4 | 11 | 18 | 25 | 1 | 8 | 15 | 22 | 29 | 5 | 12 | 19 | 26 | 3 | 10 | 17 | 24 | 31 | 7 | 14 | 21 | 28 | 5 | 12 | 19 | 26 | |
| 40 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 40 |
| 38 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 38 |
| 36 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 36 |
| 34 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 34 |
| 32 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 32 |
| 30 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 30 |
| 28 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 28 |
| 26 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 26 |
| 24 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 24 |
| 22 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 22 |
| 20 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 20 |
| 18 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 18 |
| 16 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 16 |
| 14 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 14 |
| 12 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 12 |
| 10 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 10 |
| 8 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 8 |
| 6 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 6 |
| 4 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 4 |
| 2 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 2 |
| 0 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | 0 |

Itwill be seen that August and September give us the greatest number of deaths, and, as in previous years, these are in children under the age of one year.

My report on Zymotic Diarrhœa in 1903 to the Local Government Board will be found as Appendix II.

## DIPHTHERIA.

| | |
|---|---|
| Number of Notifications ..... | 38 |
| Number of deaths, including Croup..... | 13 |
| Mortality per 1,000 of population ..... | ·2 |

We have had a decrease in the number of cases notified, namely, 38 against 60 in 1902, and the mortality against these cases is also decreased ·2 per 1,000 of population, against ·38, The following table shows the number of cases notified and the number of deaths :—

| | Notified. | Deaths. |
|---|---|---|
| January ..... | 8 | 1 |
| February ..... | 2 | 2 |
| March ..... | 4 | 1 |
| April ..... | 4 | 2 |
| May ..... | 2 | 1 |
| June ..... | 4 | — |
| July ..... | 5 | 1 |
| August ..... | 2 | 4 |
| September ..... | ... | ... |
| October..... | 3 | ... |
| November..... | 1 | ... |
| December ..... | 3 | 1 |
| Total..... | 38 | 13 |

The following is the result of the examinations bacteriologically made at the Thompson Yates Laboratory :

Number of cases, 2.
Streptrococus present, 1 ; Bacillus absent, 1.

## ERYSIPELAS.

| | |
|---|---|
| Number notified ..... | 51 |
| Number of deaths ..... | 2 |
| Mortality per 1,000 of population..... | ·03 |

We have a decrease in the number of deaths from Erysipelas, 2 against 7, showing a decrease in the mortality rate.

Enquiries were made as to the sanitary state of the houses and yards, with the following results :—

| Address. | Cause. | Condition of Yard and other Remarks. |
|---|---|---|
| 10, Acton's Walk | Cold | Yard, part flagged. |
| 9, Adelaide Street | Cold | Yard flagged. |
| 37, Baron Street | Accident | Yard flagged, house adjoins open field. |
| 42, Bolton Street | Accident | Yard part flagged. |
| 69, Byrom Street | Cold | Yard unpaved. |
| 62, Brookhouse Street | Cold | Yard flagged. |
| 16, Burlington Street | Not known | Yard unpaved. |
| 3, Burlington Street | Cold | Yard part flagged, defective drains. |
| 8, Bottling Wood | Not known | Yard paved. |
| 3, Catherine Street | Cold | Yard flagged. |
| 3, Cambridge Street | Cold | Yard part flagged. |
| 79, Caroline Street | Cold | Yard flagged. |
| 35, Chancery Street | Accident | Yard flagged. |
| 3, Church Terrace | Cold | Yard flagged, unpaved passage. |
| 7, Cowling Street | Cold | Yard flagg'd,unpav'd stre't |
| 63, Darlington Street | Cold | Yard flagged. |
| 60, Delph Street | Cold | Yard flagged, unpaved passage |
| 70, Dicconson Street | From Blow | Yard flagged. |
| 2, Farrimond's Yard, School Lane | From Blow | Yard paved. |
| 15, Field Street | Cold | Yard flagged. |
| 27, Great George Street | Cold | Yard flagged. |
| 8, Gidlow Lane | Cold | Open space at rear,unpaved, yard flagged. |
| 73, Greenough Street | Cold | Yard flagged. |
| 106, Hardybutts | Accident | Yard flagged, defective drains. |
| 3, Hardy Street | Accident | Back passage unpaved, yard flagged. |
| Infirmary | Not known | |
| 7, Kent Street | Cold | Yard unpaved. |
| 29, Leader Street | Not known | Yard flagged. |
| 3, Lyon's Yard, Ironmonger Lane | Cold | Yard paved, defective. |
| 79, Lime Street | Accident | Yard paved. |
| 28, McCormick Street | Accident | Yard flagged. |
| 94, Millgate | Cold | Yard paved. |
| 2, Ormesher's Yard | Cold | Yard flagged. |
| 12, Ormandy's Houses | Cold | Yard part paved, unpaved street. |
| 13, Swinley Street | Cold | Yard flagged. |
| 5, Spring Street | Cold | Yard unpaved. |
| 5, Snape Street | Cold | Yard flagged. |
| 5, Upper St. Stephen Street | Cold | Yard flagged. |
| 19, Vine Street | Cold | Yard flagged, unpaved passage. |
| 14, Vaughan Street | Cold | Yard flagged, open drain. |
| 15, Vauxhall Road | Cold | Yard paved. |
| 279, Wallgate | Cold | Yard flagged. |
| 5, Wells Street | Cold | Yard unpaved. |
| 7, Wilcock Street | Cold | Yard flagged. |
| Wigan Lane | Not known | Yard flagged. |
| 105, Wigan Lane | Bad Leg | Yard unpaved. |
| The Lodge, Wigan Lane | Cold | Surroundings unpaved. |
| 89, Wrightington Street | Cold | Yard flagged. |
| 412, Woodhouse Lane | Accident | Yard flagged. |
| 306, Woodhouse Lane | Accident | Yard flagged |



Gee Block. Opened December, 1902.

## PUERPERAL FEVER.

| | |
|---|---|
| Number of cases notified ..... | 5 |
| Number of deaths ..... | 1 |
| Mortality per 1,000 of population ... | ·016 |

We have a decrease in the number of cases notified, and a decrease in the death-rate. None of the cases appear to have been communicated one to another, and everything was done to prevent such an occurrence.

In future, owing to the Midwives Act being in operation, it will be necessary to have a special report on each case.

## SANATORIUM.

The wards have been less crowded than in the previous years owing to a less number of cases, and also to the increased accommodation.

The arrangements made in the nursing department have been satisfactory.

The Decker Hospital has been sufficient for the Small Pox cases, and the improvements made, on its removal from the old site, have been of great advantage. The number of cases of Small Pox therein treated was 73, with one death; seven of these cases were from the adjoining district of Aspull, and are not therefore included in the Wigan notifications.

The number of infectious cases notified compulsorily is as follows:—

| | Notifications. | Removed to Sanatorium. | Died in Sanatorium. |
|---|---|---|---|
| Small Pox ..... | 66 | 73 | 1 |
| Typhus ..... | ... | ... | ... |
| Scarlet Fever ..... | 362 | 205 | 15 |
| Enteric „ ..... | 51 | 34 | 5 |
| Diphtheria ..... | 38 | ... | ... |
| Puerperal Fever ..... | 5 | ... | ... |
| Cholera ..... | ... | ... | ... |
| Membraneous Croup ..... | ... | ... | ... |
| Erysipelas ..... | 51 | ... | ... |
| Other ..... | ... | 7 | ... |
| Total ..... | 573 | 319 | 21 |

In the Sanatorium on December 31st, 1903, there were 26 patients, namely, Scarlet Fever 23, Enteric Fever 2, others 1.

| | Smallpox. | Scarlet. | Enteric. | Others. | Total. |
|---|---|---|---|---|---|
| In-Patients Jan. 1st, 1903.. | 3 | 32 | 2 | 1 | 38 |
| Admitted in 1903 ..... | 73 | 205 | 34 | 7 | 310 |
| Discharged ,, ..... | 75 | 199 | 29 | 7 | 319 |
| Died ,, ..... | 1 | 15 | 5 | ... | 21 |
| In-Patients Jan. 1st, 1904 | 0 | 23 | 2 | 1 | 26 |

The number of deaths in the Sanatorium was 21 ; 15 died from Scarlet Fever and 5 from Enteric, and 1 from Small Pox.

During the year there were 310 patients discharged, and 21 died, making a total of 331.

The number of days they were in was 11,859, or 37·1 days for each patient, against 44·8 days average for 1902.

The cost of maintenance was as follows :—

| 1902. | Food. | Stimulants. |
|---|---|---|
| | £ s. d. | £ s. d. |
| January..... | 23 9 10 | 4 10 7 |
| February ..... | 66 2 5 | 10 11 4 |
| March ..... | 65 0 3 | 7 1 3 |
| April ..... | 43 17 2 | 8 2 1 |
| May ..... ..... | 64 3 0 | 9 4 5 |
| June ..... ..... | 38 13 10 | 5 1 6 |
| July ..... | 27 11 1 | 5 16 6 |
| August ..... | 32 14 9 | 4 12 7 |
| September ..... | 36 0 11 | 1 16 10 |
| October ..... | 24 5 1 | 5 7 7 |
| November ..... | 46 12 10 | 9 18 2 |
| December ..... | 42 11 3 | 1 1 6 |
| Total..... | 511 2 5 | 73 4 4 |

| | | | |
|---|---|---|---|
| Cost per patient, | 1903 ..... | £1 12 0 ..... | £0 4 7 |
| ,, | 1902 ..... | £1 13 0 ..... | £0 4 9 |
| ,, | 1901 ..... | £1 9 $10\frac{1}{4}$ ..... | £0 4 $10\frac{1}{4}$ |
| ,, | 1900 ..... | £1 12 $6\frac{3}{4}$ ..... | £0 4 $3\frac{1}{2}$ |
| ,, | 1899 ..... | £1 12 $4\frac{1}{3}$ ..... | £0 5 $11\frac{1}{4}$ |
| ,, | 1898 ..... | £1 8 $6\frac{1}{4}$ .. ... | £0 3 $1\frac{1}{2}$ |



Ward—Gee Block.

The total cost of the Sanatorium is as follows :—

| | £ | s. | d. | Average Cost per Patient. £ | s. | d. |
|---|---|---|---|---|---|---|
| Master, Matron, and Nurses | 901 | 16 | 8 | 2 | 16 | 6½ |
| Porter, Repairs, &c | 706 | 7 | 6 | 2 | 4 | 3¼ |
| Patients' Keep | 511 | 2 | 5 | 1 | 12 | 0½ |
| Stimulants | 73 | 4 | 4 | 0 | 4 | 7 |
| Medical Superintendent | 150 | 0 | 0 | 0 | 9 | 4¾ |
| Clerk | 10 | 0 | 0 | 0 | 0 | 7½ |
| 1903 | 2352 | 10 | 11 | 7 | 7 | 5½ |
| Ditto 1902 | 2101 | 5 | 11 | 6 | 19 | 0¾ |
| „ 1901 | 1992 | 9 | 6 | 9 | 6 | 5¾ |
| „ 1900 | 2038 | 14 | 11 | 7 | 5 | 6 |
| „ 1899 | 1914 | 12 | 4 | 7 | 4 | 6¾ |
| „ 1898 | 1851 | 3 | 11 | 7 | 16 | 2½ |
| „ 1897 | 1384 | 4 | 7 | 10 | 12 | 3½ |
| „ 1896 | 1653 | 10 | 11 | 11 | 6 | 6¾ |

The Administrative Department cost :—

| 1903. | Wages. £ | s. | d. | Board. £ | s. | d. | Total. £ | s. | d. |
|---|---|---|---|---|---|---|---|---|---|
| January | 34 | 5 | 0 | 38 | 6 | 1 | 72 | 11 | 1 |
| February | 34 | 12 | 4 | 38 | 5 | 8 | 72 | 18 | 0 |
| March | 37 | 12 | 9 | 41 | 18 | 7 | 79 | 1 | 4 |
| April | 36 | 18 | 4 | 43 | 15 | 8 | 80 | 14 | 0 |
| May | 35 | 8 | 4 | 41 | 12 | 4 | 77 | 0 | 8 |
| June | 36 | 13 | 4 | 41 | 12 | 4 | 78 | 5 | 8 |
| July | 35 | 10 | 0 | 37 | 16 | 6 | 73 | 6 | 6 |
| August | 36 | 11 | 2 | 37 | 11 | 0 | 74 | 2 | 2 |
| September | 34 | 7 | 4 | 34 | 0 | 8 | 68 | 8 | 0 |
| October | 36 | 9 | 4 | 36 | 16 | 6 | 73 | 5 | 10 |
| November | 37 | 1 | 9 | 39 | 2 | 8 | 76 | 4 | 5 |
| December | 37 | 10 | 0 | 39 | 9 | 0 | 76 | 19 | 0 |
| Total | 432 | 9 | 8 | 470 | 7 | 0 | 902 | 16 | 8 |

## SANATORIUM STAFF.

Master
House Keeper.
6 Nurses.
3 Probationers.
1 Laundress.
2 Assistant Laundresses.
2 Ward Maids.
1 Housemaid-Waitress.
1 Kitchenmaid.
1 Scullery Maid.
1 Porter and Gardener.
1 Assistant Gardener.

## TABLE OF ADMISSIONS AND DISCHARGES FOR 1903.

| 1903. | Admitted. | | | | | | Discharged. | | | | | | Died. | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Small-pox. | Scarlet Fever. | Enteric. | Typhus. | Others. | Total. | Small-pox. | Scarlet Fever. | Enteric. | Typhus. | Others. | Total. | Small-pox. | Scarlet Fever. | Enteric. | Typhus. | Others. | Total. |
| January ..... | 23 | 18 | 2 | 0 | 3 | 46 | 11 | 20 | 1 | 0 | 3 | 35 | 0 | 2 | 0 | 0 | 0 | 2 |
| February ... | 13 | 12 | 1 | 0 | 2 | 28 | 15 | 13 | 3 | 0 | 0 | 31 | 0 | 2 | 0 | 0 | 0 | 2 |
| March ..... | 10 | 18 | 2 | 0 | 0 | 30 | 18 | 24 | 2 | 0 | 2 | 46 | 0 | 1 | 0 | 0 | 0 | 1 |
| April ..... | 17 | 20 | 7 | 0 | 0 | 44 | 10 | 11 | 3 | 0 | 1 | 25 | 1 | 2 | 4 | 0 | 0 | 7 |
| May..... | 2 | 20 | 2 | 0 | 0 | 24 | 12 | 15 | 2 | 0 | 0 | 29 | 0 | 0 | 0 | 0 | 0 | 0 |
| June ..... | 2 | 20 | 1 | 0 | 0 | 23 | 1 | 26 | 1 | 0 | 0 | 28 | 0 | 1 | 0 | 0 | 0 | 1 |
| July ..... | 1 | 15 | 2 | 0 | 1 | 19 | 2 | 16 | 1 | 0 | 0 | 19 | 0 | 1 | 0 | 0 | 0 | 1 |
| August ..... | 1 | 16 | 0 | 0 | 0 | 17 | 1 | 13 | 1 | 0 | 1 | 16 | 0 | 0 | 0 | 0 | 0 | 0 |
| September... | 0 | 18 | 5 | 0 | 0 | 23 | 1 | 17 | 1 | 0 | 0 | 19 | 0 | 1 | 0 | 0 | 0 | 1 |
| October ..... | 3 | 14 | 8 | 0 | 0 | 25 | 0 | 14 | 1 | 0 | 0 | 15 | 0 | 1 | 0 | 0 | 0 | 1 |
| November ... | 1 | 11 | 1 | 0 | 0 | 13 | 4 | 14 | 6 | 0 | 0 | 24 | 0 | 2 | 0 | 0 | 0 | 2 |
| December ... | 0 | 23 | 3 | 0 | 1 | 27 | 0 | 16 | 7 | 0 | 0 | 23 | 0 | 2 | 1 | 0 | 0 | 3 |
| Total ..... | 73 | 205 | 34 | 0 | 7 | 319 | 75 | 199 | 29 | 0 | 7 | 310 | 1 | 15 | 5 | 0 | 0 | 21 |



Ward—Gee Block.

# CONSTITUTIONAL DISEASES.

## TUBERCULAR DISEASES.

Under the heading of Tubercular Diseases we include deaths from Consumptive Diseases, such as Phthisis Pulmonalis, Tabes Mesenterica, Tubercular Meningitis, Wasting Diseases of Infants (Marasmus), and other Tubercular affections.

The number of deaths from Phthisis is 74, against 55 in 1902, and 73 in 1901. The number of deaths from other Tubercular affections is 19, against 13 in 1902, and 20 in 1901.

From Wasting Diseases of Infants we have 53 deaths, against 50 in 1902.

The rates are as follows :—

| | | |
|---|---|---|
| Phthisis Pulmonalis..... | 1·1 | per 1,000 of population. |
| Other Tubercular Diseases... | ·3 | ,, |
| Wasting Diseases of Infants.. | ·84 | ,, |

If taken together as Tubercular affections we have 146 deaths, or a rate of 2·24 per 1,000 of the population.

### Phthisis and Tubercular Diseases, but not including Marasmus.

The deaths occurred in the following wards :—

| | |
|---|---|
| St. George Ward ..... | 3 |
| Lindsay Ward..... | 6 |
| St. Catharine Ward ..... | 12 |
| St. Patrick Ward ..... | 11 |
| St. Thomas Ward ..... | 9 |
| Poolstock Ward ..... | 6 |
| Victoria Ward..... | 6 |
| St. Andrew Ward ..... | 13 |
| Swinley Ward..... | 8 |
| All Saints Ward ..... | 3 |
| In Union Workhouse, but belonging to Wigan ..... | 16 |

## RHEUMATISM.

Rheumatism caused 7 deaths, against 7 deaths in 1902, and 11 in 1901, and we have 60 deaths from heart affections, against 53 in 1902, and 66 in 1901.

## LOCAL DISEASES.

Respiratory Diseases, such as Pneumonia and Bronchitis, caused 331 deaths, against 358 in 1902; Pneumonia caused 190, against 200; and Bronchitis caused 141, against 158.

## INQUESTS & UNCERTIFIED DEATHS.

The number of Inquests for 1903 is 106, against 95 for 1902, and 126 in 1901, and the following verdicts have been recorded :—

| | | |
|---|---|---|
| I. | Natural Causes | 23 |
| II. | Accidents, burned | 12 |
| | „ run over | 3 |
| | „ scalded | 2 |
| | „ colliery | 23 |
| | „ fall downstairs | 2 |
| | „ drowned | 2 |
| | „ falls | 7 |
| | „ railway | 2 |
| | „ suffocation | 1 |
| | „ other | 16 |
| III. | Suicides, poison | 2 |
| | „ hanging | 2 |
| | „ cut throat | 4 |
| | „ railway | 1 |
| | „ drowning | 3 |
| IV. | Murder, kicking | 1 |
| | Total | 106 |

There were 10 deaths uncertified in 1903, against 17 in 1902, and 15 in 1901. They were as follows :—

| | |
|---|---|
| Premature Birth | 5 |
| Convulsions | 3 |
| Asphyxia | 1 |
| Whooping Cough | 1 |
| Total | 10 |

# PART III.

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# GENERAL SANITARY WORK.

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BAKEHOUSES.

FACTORY AND WORKSHOPS ACTS, 1892, 1895, 1899, AND 1901.

DAIRIES AND COWSHEDS AND MILKSHOPS ORDER, 1885 AND 1886.

MEAT INSPECTION AND SLAUGHTER-HOUSES.

BLACK SMOKE NUISANCE.

PROPERTY UNFIT FOR HUMAN HABITATION.

UNPAVED YARDS AND PASSAGES.

WATER SUPPLY AND RAINFALL.

BOROUGH SURVEYOR'S DEPARTMENT.



# BAKEHOUSES.

The Bakehouses have been visited regularly by the Inspector, and attention has been paid to any existing defect. I have only personally visited a portion of the number, and I found most of these satisfactory. The Factory and Workshops Act of 1901 will enable us to control more effectually all bakehouses whether underground or otherwise.

In regard to underground bakehouses I reported to your Committee on the 15th of January, 1903. My report was considered at a meeting of the Committee on February 19th, 1903, and confirmed by the Council on March 4th, 1903.

In that respect I recommended the following conditions before a certificate should be granted. That the bakehouse should have :—

1. Sufficient daylight illumination, that is, a person shall be able to read a newspaper in the middle of the cellar at mid-day.

2. Adequate means of ventilation and perfect exclusion of street dust.

3. Does not directly communicate with the outside by steps.

4. Smooth and impermiable walls and floors and dust tight ceiling.

5. Sufficient air space for the workers, and a height of not less than 8 feet throughout.

6. Is provided with movable troughs and fittings on castors or wheels.

7. Proper places for storage of flour, coal, and refuse material.

8. No drain inlet within the bakehouse.

9. If traversed by a drain, such drain be watertight, properly constructed, ventilated, and discharge into an intercepting gully.

10. Proper W.C. accommodation for the men or women employed therein.

The following is my report on the existing underground bakehouses on December 31st, 1903.

14, Rodney Street,
31st December, 1903.

RE UNDERGROUND BAKEHOUSES.

On January 1st, 1903, there were 19 Underground Bakehouses in the Borough.

Eighteen notices were served on Proprietors as follows :—

Nine condemning the Underground Bakehouses as not being fit for baking purposes.

Nine notices were served on proprietors for alterations to underground bakehouses.

One underground bakehouse was satisfactory.

Twelve underground bakehouses will close, and will be replaced by four new bakehouses and five kitchen bakehouses.

Six underground bakehouses have been altered according to notice, and are satisfactory.

Two proprietors (S. Graham, Boyswell Lane, and Mrs. McEwen, 69, Mesnes Street) have discontinued business.

Two proprietors (Mrs. Woosey, Scholes, and Mrs. Hunter, Scholes) are giving up the baking business.

* One notice was served on the occupier of a ground floor bakehouse, which was condemned on sanitary grounds as being unfit for use as a bakehouse.

Seven underground bakehouses will be required to be certified as fit :—

36, Market Street.
24, Earl Street.
108, Wallgate.
Woodcock Street.
34, Wigan Lane.
52, Market Street.
12, Wallgate.

The 12 to be closed are :—

22, Scholes.
176, Wallgate.
38, Market Street.
69, Mesnes Street.

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* The ground floor bakehouse condemned has been rebuilt, and is counted in with the four new bakehouses.

6, Boyswell Lane.
39, Wellington Street.
43, Scholes.
36, Wigan Lane.
105, Schofield Lane.
10a, Hardybutts.
19, Mesnes Street.
55, Birkett Bank.

It is enacted by the same Act that after the 1st day of January, 1904, an underground bakehouse shall not be used unless certificated by the District Council, the County Borough Council being the authority in Wigan.

The conditions were served on 18 occupiers of underground bakehouses. One was satisfactory, five had been discontinued, as the total stated in my report was 24 underground and 90 aboveground. We have now in the Borough 121 bakehouses and seven underground bakehouses which have received certificates.

I presented the following report to your committee on January 6th, 1904, and this was confirmed by the Council on that day.

Underground Bakehouses.—Report of the Medical Officer of Health was read, recommending that the following underground bakehouses be certified as suitable for the purposes of bakehouses under Section 101 of the Factory and Workshop Act, 1901, viz. :—

No. 26, Market Street.
No. 24, Earl Street.
No. 108, Wallgate.
Woodcock Street (Kennedy's Restaurant).
No. 34, Wigan Lane.
No. 52, Market Street.
No. 12, Wallgate.

It is satisfactory to find that the underground bakehouses have been reduced to seven in number, and the Act prohibits any new bakehouse being built underground.

## MR. BISHOP'S REPORT.

Number of bakehouses on the register, 121.

Inspections and re-inspections during the year, 260, which revealed the following defects :—

104 bakehouses required to be limewashed.

VENTILATION.—Two were insufficiently ventilated.

CLEANLINESS.—In 20 instances the floors required cleansing.

Twelve notices were served for alterations.

Nine defective floors.

Two defective roofs.

Four accumulations of refuse in yards.

One filthy window.

One filthy yard.

One cellar bakehouse opened. Notice to close.—Closed.

Two were in very bad condition. One has been re-built; arrangements have been made to alter the other.

The above defects have been remedied.

F. G. BISHOP,
Inspector.

## FACTORY AND WORKSHOPS ACT, 1905 AND 1901, AND SHOP HOURS ACT, 1892 AND 1899.

Mr. Sumner has supplied me with the Inspector's (Mr. Bishop) report, which is as follows :—

### SHOP HOURS ACT, 1892-1899.

During the year 1903 much time was given to observations in reference to the opening and closing of shops, and I have every reason to believe the hours are within the limit.

One hundred and twenty-three shops were visited.

Twenty-two were domestic workshops, and did not come under the Act. At twenty-three no young persons were employed. At eleven shops young persons were employed contrary to the provisions of this Act, by not having the abstract exhibited; these were at once obtained.

### SEATS FOR SHOP ASSISTANTS ACT, 1899.

This section of the Act has been carried out, and I found the seats for female assistants provided.

## FACTORY AND WORKSHOPS ACT, 1895-1901.

Mr. Bishop has regularly inspected the factories and workshops in the town and reported defects as discovered. Mr. Sumner, the Chief Sanitary Inspector, has inspected, sometimes with the Factory Inspector, the means of escape in the case of fire. As the alterations recommended were carried out by the owners or occupiers, it was unnecessary for me to make special visits or take further action.

## FACTORY AND WORKSHOP ACT, 1901.

Total inspections during the year ..... 584

Number of workshops on the register ..... 292

| | | | |
|---|---|---|---|
| Laundries | 3 | Cloggers | 41 |
| Blacksmiths | 6 | Saddlers | 4 |
| Wheelwrights | 5 | Tailors | 47 |
| Cycles | 6 | Dressmakers | 70 |
| Watchmakers | 5 | Milliners | 33 |
| Carpenters | 2 | Underclothing | 26 |
| Cabinet Makers | 4 | Ice Cream | 5 |
| Carver | 1 | Tin Plate Workers | 4 |
| Hat and Caps | 1 | Hard Confectioners | 2 |
| French Polishers | 2 | | |
| Boot Makers and Repairers | 25 | | 292 |

The above premises contain 355 workrooms.

These inspections revealed the following defects :—

Cleanliness.—In nine instances the floors required cleansing.

Air-space.—Two rooms were overcrowded.

Ventilation.—Five workrooms were insufficiently ventilated.

Sanitary Conveniences.—In five instances sanitary conveniences were required, and two were defective.

In three instances the drains were defective.

Five waste water pipes were connected to the drains.

Fifty-eight workshops required to be limewashed.

Eleven floors were defective.

Defective ceilings two.
Three defective downspouts.
Three defective roofs.

Three defective yard flagging.

Three accumulations of refuse.

Fifty-two workrooms measured for cubic feet space.

Twenty-one workrooms were found not registered.

One dangerous stove.

These defects and requirements have all been dealt with and notices complied with, except in nine cases, which are receiving attention.

Thirty-two employers have sent in lists of out-workers (containing one hundred and eight names). Ten were registered under the Workshops Act. Twelve were outside the borough, and were sent on to the District Council in whose district they were employed.

Those visited were found satisfactory.

Section 14 of the above Act :—*Provision of means of escape in case of fire.* Special inspections have been made at eleven factories. Four were considered satisfactory. Seven notices were served on the owners to provide twelve outside escapes, also provide or to alter eight doors. Several notices have been complied with; others are in hand.

## MEAT INSPECTION AND SLAUGHTER HOUSES.

The Slaughter Houses have been regularly visited by the Inspectors, and I have inspected when there were any doubts about the meat. The occupiers of the various slaughter houses themselves send for the Inspector when any sign of disease is seen, and if the meat is unfit for human food, they are allowed to surrender it. Indiscriminate visits are paid at regular and irregular times, but during the past year we have had no seizure.

I can only repeat here that the majority of slaughter houses are not satisfactory from a public health point of view, or for the preparation of the food for man. I hope in the near future we may see a Municipal Slaughter House, which will give us every facility for inspection and also be a fit place for the preparation and storage of flesh meat.

## BLACK SMOKE NUISANCE.

I can only repeat what I said in my last report, as the same applies for the past year, namely :—

Observations have been frequently taken and notices served on the offenders, but no prosecutions have taken place. Much more could be done in the prevention of this nuisance if the Sanitary Officials were supported to the same extent as they are in other manufacturing towns. Some improvement has taken place during the last few years, but we are much behind what can be attained if proper efforts were made by the offenders.

## PROPERTY UNFIT FOR HUMAN HABITATION.

The following list of insanitary dwellings have been reported during 1903, and dealt with by the Insanitary Houses Committee under the Housing of the Working Classes Act, 1890, Part II :—

Nos. 1, 2, 3, 4, and 5, Fairclough's Court, Chapel Lane.
Nos. 25, 27, and 29, Chapel Lane.
Nos. 1 and 2, Lea's Court, Chapel Lane.
Nos. 3, 4, and 13, Cooper's Row, Market Place.
Nos. 1, 2, 3, 4, 5, 6, 7, and 8, Harvey's Court, Standishgate.
Nos. 1, 2, and 3, Altham's Yard, Standishgate.
Nos. 3 and 5, Lord Street.
Nos. 1 and 2, Howard's Yard, Lower Morris Street.
Nos. 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, and 14, Rainford's Buildings, Wigan Lane.
Nos. 6, 7, 8, 9. 10, 11, 12, 13, 14, 15, 16, 17, and 23, Vitriol Fold, Woodhouse Lane.
Nos. 12, 13, and 14, Birkett Bank Terrace.
Nos. 1, 2, 3, 4, 5, and 6, Leach's Yard, Belvoir Street ; and
Nos. 14, 16, and 18, Belvoir Street.

We have dealt so largely with unhabitable houses during the past few years, that it is necessary to deal cautiously with the subject, until there is a probability of suitable houses being found for the displaced tenants.

The Housing of the Working Classes Committee are providing suitable houses on the Spring Gardens site for this class of tenant.

## UNPAVED YARDS AND PASSAGES.

This work is progressing slowly, and at the same time a gradual conversion is being made of the pail closets into water closets.

The following is a list of unpaved yards and passages that have been dealt with by this department during 1903 :—

7 and others, Higham Street
228-238, Woodhouse Lane
1-11, Glebe End Street
1-23, Moorfield Street
7-93, Ingram Street
12, 14, 18, Ingram Street
20, 22, Ingram Street
3, 5, 7, Newark Street
15-23, Newark Street
2, Newark Street
83, and others, Clayton Street
172-176, Gidlow Lane
Smithy Yard, Wigan Lane
107, Wigan Lane
26-38, Hardybutts
1-4, Zulu Street
2-8, Bankes Street
42a-46a, Hardybutts
2, Cambridge Street
14-32, Spring Street
Manchester Place

The following have also been dealt with for defective surface of yards :—

2, Kay Street
19, Moorfield Street
27a, 37, 49. Great George Street
57-65, 73, Great George Street
85-93, Great George Street
97-103, Great George Street
111, 117, 125, Great George Street
129, 133, Great George Street
112, 120, 130, Great George Street
Waddington's Buildings, Clayton Street
4, Norfolk Street
37, Silver Street
10, 23 to 33, Stirling Street
1, Holme Terrace
9 and others, Earl Street
St. Ann's Square, Coppull Lane
5, Manchester Place
53, Wigan Lane
4, Golden Cross Yard
15, York Street East
2, 6, 8, Ingram Street
194, 196, Woodhouse Lane
180, 186, Woodhouse Lane
172, 174, 178, Woodhouse Lane
152-164, Woodhouse Lane
112-116, 102, Woodhouse Lane
10, Swinley Lane
170, Gidlow Lane
277, Gidlow Lane
111-119, Gidlow Lane
4, 12, Gidlow Lane
20, 27, 29, Alfred Street
2, Greenbank Cottages, Foy Street
28, Swinley Lane
111, Wigan Lane
93 and others, Wigan Lane
Jackson's Row, Wigan Lane
101, Wrightington Street

# WATER SUPPLY.

During the past year the water supply has been more than ample, and the quality has been all that could be desired.

Mr. Orsman's monthly reports from his analyses are as follows :—

1903.

*January.*—Hardness before boiling 11 degrees, after 7·5 degrees. The above water is a slight improvement on the sample taken last month, but the hardness is still higher than usual.

*February.*—Hardness before boiling 12·5 degrees, after 8 degrees. The above water still continues to be harder than usual, and is 1·5 degrees harder than last month. The sample gave no deposit on standing.

*March.*—Hardness before boiling 12 degrees, after 7·5 degrees. The above sample taken from Wallgate was clear and bright, and showed little change from last month.

*April.*—Hardness before boiling 12 degrees, after 8 degrees. The above sample was clear and bright, and showed little change from last month.

*May.*—Hardness before boiling 11·5 degrees, after 7·5 degrees. The above sample is practically the same as last month, but is a trifle softer.

*June.*—Hardness before boiling 10·5 degrees, after 6·5 degrees. The above sample is softer than last month, otherwise there is little change. The water appears clear and bright.

*July.*—Hardness before boiling 12·5 degrees, after 8·5. The water is two degrees harder than the sample taken last month, otherwise there is little change.

*August.*—Hardness before boiling 12·5 degrees, after 8·5 degrees. There is hardly any change in the composition of the water as compared with last month. The water gave no deposit on standing 48 hours.

*September.*—Hardness before boiling 10·5 degrees, after 8 degrees. The water is bright and clear, and softer than the sample taken last month. The albuminoids remain the same.

*October.*—Hardness before boiling 10·7 degrees, after 8·3 degrees. The above sample gave a slight brown deposit of oxide of iron on standing, otherwise there is little change from the last sample.

*November.*—Hardness before boiling 9·5 degrees, after 7 degrees. The above water is slightly softer than last month, but the albuminoids have gone up to the average figure of ·06 per million.

*December.*—Hardness before boiling 9·5 degrees, after 7·0 degrees. The water is much the same as last month, and remains bright on standing.

## RAINFALL.

Summary for 1903.

| Month. | Rainfall in Inches. | No. of days on which rain fell, being ·01 of an inch or more. |
|---|---|---|
| January | 2·68 | 17 |
| February | 2·87 | 18 |
| March | 3·31 | 22 |
| April | 1·83 | 13 |
| May | 3·04 | 17 |
| June | 1·92 | 9 |
| July | 2·95 | 14 |
| August | 5·31 | 21 |
| September | 5·16 | 20 |
| October | 7·60 | 29 |
| November | 3·81 | 20 |
| December | 1·98 | 15 |
| Total | 42·46 | 215 |

The mean annual fall for the previous ten years is 33·82 inches.

The mean annual fall for the past 46 years is 37·63 inches.

## DAIRIES AND COWSHEDS AND MILK-SHOPS ORDER, 1885 AND 1886.

Improvements have been made in a good many of the existing shippons, but further action is required to make some of the cowkeepers comply with the regulations under these orders, which have been adopted by the Council.

I may here state that I am pleased with the improvements made, although the work has been slow, but so far we have had no necessity to take action against the owners or occupiers.

I have received the following Report from Mr. Woods, F.R.C.V.S., who is the Veterinary Inspector :—

Gentlemen,

In making my yearly statement on the inspections under the Dairies, Cowsheds, and Milkshops Order, I have to report a steady, but slow progress, in the alterations made necessary through the adoption by the County Borough of the Model Regulations issued by the Local Government Board. Three years ago only two cowsheds complied with these regulations, now nearly threequarters of the cowsheds of the town approximate, at any rate, to these regulations, and the Town Clerk has it under consideration as to issuing of summonses to the few remaining ones that persuasion and threats have failed to move. It seems now more necessary than ever to draw attention to the fact that these regulations and these inspections apply only to the Borough, whereas the greater portion of the milk supply comes from outside the Borough. The sources of the milk supply may be divided into three. 1st. The urban coming from the town itself, where the cowsheds and the cattle are inspected, special care being taken that so far as possible no cows with diseased udders are permitted to supply milk for human consumption. 2nd. Suburban, where the little farmers and cowkeepers outside the Borough drive into the town and retail the milk directly. Some of these, such as Ince, have to some extent adopted an inspection of the cowsheds; and some, as Pemberton, appear to entirely ignore the necessity for inspection. Then, 3rd, there is what has been termed the rural source of supply coming from distant farmers, and sent into the town by rail.

The sanitary conditions under which much of this source of supply is produced are often exceedingly bad. Mr. Lloyd, the veterinary inspector for Sheffield, states

that he has visited a large number of these farms, and has found the cowsheds often totally devoid of any means of lighting or ventilation except the doors, the superficial and cubic area being very scanty, the conditions of the floors such that if paved at all it is generally with rough pebbles or flag stones, the irregular joints of which allow percolation of the fluid excreta into the earth until it is a veritable cesspool. The water supply at these farms, too, is often only what is known as the horse pond, often situated in close proximity to the manure heap, the liquid from which, particularly in wet weather, finds its way into the pond. The same tale is told by all those who have gone into the subject. In both Liverpool and Manchester analysis made some time ago proved that the urban milk was both better and cleaner than that from the out-districts. Why so little care as to cleanliness should be taken with milk, which is so easy to contaminate. and with which too much care can scarcely be taken, it is difficult to say, but it is impossible for a cow's udder to be clean that lies on a dirty floor, and only where these regulations are operative is any care generally taken with regard to the cleanliness of udders before milking.

There is no power to compel country districts to adopt the regulations, and it is this, I suppose, which has led to the formation of Muncipal milk depôts, which are in full work in St. Helens, Liverpool, and other places, and where certified milk can be obtained. I do not know sufficient of the *modus operandi* of the depôts to do more than draw attention to their existence, but I think the subject well worthy of the investigation.

Yours obediently,

Wm. Woods.

# BOROUGH SURVEYOR'S DEPARTMENT.

The Borough Surveyor has kindly supplied me with the following particulars :—

| | | | T. | C. | Q. |
|---|---|---|---|---|---|
| House refuse collected in Borough from January 1st to December 31st, 1903 ... ... ... | | | 18,103 | 10 | 1 |
| Pail excreta removed ... ... ... ... ... ... | | | 8,232 | 11 | 2 |
| Nightsoil removed ... ... ... ... ... ... | | | 544 | 0 | 0 |
| Number of pail closets in borough | 7,958 | | | | |
| Number of pails collected in 1903 | 460,205 | | | | |
| Cost (including washing and distribution)... ... ... | | | £2,112 | 8 | 3 |
| Cost of collecting ashes during 1903 ... ... ... | | | £2,017 | 11 | 4 |
| Number of privy middens in borough ... | | 19 | | | |
| ,, ,, emptied in 1903 | | 485 | | | |
| ,, new houses erected in 1903 ... | | 337 | | | |
| ,, slop closets put in in 1903 ... | | Nil. | | | |
| ,, water closets in borough ... | | 3061 | | | |

WM. BOLTON,

Borough Engineer.

## Appendix I.

### Corporation of Wigan.

Officer of Health's Department,
September 14th, 1903.

To the Chairman and Members of the Sanitary Committee.

*Re* MEASLES EPIDEMIC, 1903.

Gentlemen,

The Town Clerk sent me a copy of the following letter which he had received from the Local Government Board :—

Local Government Board,
Whitehall, S.W.,
27th August, 1903.

Sir,

I am directed by the Local Government Board to state that they observe from the Returns made to the Registrar-General for the quarter ended the 4th July last that exceptional mortality (48 deaths) from Measles occurred in the Borough of Wigan during that quarter.

I am therefore to request that the Town Council will instruct their Medical Officer of Health to prepare a report on the subject. The Board desire that the report should contain information as to the circumstances in which the disease became prevalent in the Borough, as to the condition of its extension at different times during the quarter, and as to the subsequent behaviour of the epidemic. It should also contain an account of the measures adopted in the borough to prevent the spread of Measles.

The Board will be glad to be furnished with a copy of the report as early as practicable.

I am, Sir,
Your obedient Servant,
John Lithiby,
Assistant Secretary.

The Town Clerk, Wigan.

In compliance with this request I beg to submit to you my report on the epidemic.

I am, Gentlemen,

Your obedient Servant,

WM. BERRY,

Medical Officer of Health.

## REPORT.

For the past five years we have had a system of voluntary notification of the first case of Measles occurring in a house, and this has been of much use in enabling us to locate the disease when in its sporadic form. In my Annual Report for 1902, under the heading of Measles (p. 46), you will find the following:—"Measles, I am pleased to say, decreased very considerably at the end of the year 1901, in fact, the epidemic had expended itself, so that we were comparatively free after December that year. There was no month, however, in which a notification was not received, so that the disease was never entirely absent. The voluntary notification keeps us in touch with the cases. The total number of cases notified for 1902 was 291, against 1,419 cases in 1901. Of these 209 were notified by medical men, and 82, the remainder, discovered by the inspectors when inquiring into the notified cases."

In the month of December, 1902, there were 31 cases notified, and in January, 1903, 161 cases; February 251 cases, March 323 cases, April 297 cases, May 251 cases, June 86 cases, July (4th) 4 cases; total 1,373. In the month of July there were 16 cases, and in August 8 cases, showing the epidemic period was passed.

The epidemic may therefore be said to have commenced early in January and spread over a period of 6 months. In the epidemic of 1901 we had 1,419 cases spread over a similar period in the summer and autumn months, with 42 deaths, but in 1903 to July 4th, we have 1,373 cases and 101 deaths, but chiefly in the winter and spring months.

The period of epidemics may be divided into two quarters, viz.; 1st Quarter, January to April 4th; and 2nd Quarter, April 4th to July 4th.

## Number of cases of Measles reported in 1st Quarter, January 1st to April 4th, 1903.

| | 1st Case in house. | 2nd Case in house. | 3rd Case in house. | 4th Case in house. | 5th Case in house. | 6th Case in house. | Total. |
|---|---|---|---|---|---|---|---|
| Reported by Medical Men ..... | 536 | 20 | 1 | .. | .. | .. | 557 |
| Inspectors..... | 55 | 115 | 26 | 4 | .. | .. | 200 |
| | | | | | | | 757 |

Number of houses affected, 591.

The age incidence of cases was as follows :—

| Years 0-1. | Years 1-2. | Years 2-3. | Years 3-4. | Years 4-5. | Years 5-10. | Years 10 and up. | Total. |
|---|---|---|---|---|---|---|---|
| 56 | 109 | 111 | 134 | 128 | 211 | 8 | 757 |

Age incidence of deaths :—

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8 | 23 | 7 | 4 | 5 | 5 | .. | 52 |

## The number of cases reported during 2nd Quarter, April 5th to July 4th, 1903.

| | 1st Case in house. | 2nd Case in house. | 3rd Case in house. | 4th Case in house. | 5th Case in house. | 6th Case in house. | Total. |
|---|---|---|---|---|---|---|---|
| Reported by Medical Men ..... | 383 | 17 | 3 | .. | .. | .. | 403 |
| Inspectors..... | 68 | 110 | 27 | 4 | 3 | 1 | 213 |
| | | | | | | | 616 |

Number of houses affected, 451.

Age incidence of cases :—

| Years 0-1. | Years 1-2. | Years 2-3. | Years 3-4. | Years 4-5. | Years 5-10. | Years 10 and up. | Total. |
|---|---|---|---|---|---|---|---|
| 45 | 106 | 89 | 109 | 88 | 169 | 10 | 616 |

Age incidence of deaths :—

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 10 | 26 | 5 | 5 | 2 | 1 | .. | 49 |

The number of cases was, therefore, 1,373, from January 1st to July 4th, and the number of houses affected 1,042.

The deaths for the two quarters numbered 101, or 7·35 per cent.

The deaths were as follows :—

| | | |
|---|---|---|
| Week ending January | 3rd | 1 |
| „ | 10th | 1 |
| „ | 17th | 2 |
| „ | 24th | 2 |
| „ | 30th | 1—total 7. |
| February | 6th | 2 |
| „ | 13th | 8 |
| „ | 21st | 3 |
| „ | 27th | 4—total 17 |
| March | 7th | 4 |
| „ | 13th | 5 |
| „ | 21st | 7 |
| „ | 28th | 5—total 21 |
| April | 4th | 7 |
| „ | 11th | 4 |
| „ | 18th | 6 |
| „ | 25th | 5—total 22 |
| May | 2nd | 10 |
| „ | 9th | 4 |
| „ | 16th | 5 |
| „ | 23rd | 0 |
| „ | 30th | 3—total 22 |
| June | 6th | 3 |
| „ | 13th | 3 |
| „ | 20th | 4 |
| „ | 27th | 1 |
| July | 4th | 1—total 12 |
| | Total | 101 |

The percentage of deaths is much greater than in the previous epidemic of 1901, being 7·35 per cent. of cases, against 3·03. As the majority of deaths occurred from complications, the winter and cold spring season had something to do with this large mortality.

## MEASURES ADOPTED TO PREVENT THE SPREAD OF THE DISEASE.

1. Visits to the houses by inspector.
2. Supply of disinfectants.
3. School closure.
4. Disinfection of houses, clothes, and class rooms.

1. The House Visitation by Inspector.—When a notification was received, the Inspector added this to his list of infectious cases, and visited the houses, giving instructions as to isolation and use of disinfectants, and leaving printed instructions. Then afterwards visits were made at regular periods to see if the instructions were being carried out. The number of cases eventually caused the visiting to be less regular.

2. Disinfectants.—These were supplied free of cost from the sanitary office, and instructions given as to their use.

3. School Closure.—This most important measure was delayed in consequence of a desire of the Head Teachers or Managers not to close unless compelled to do so. We had reason also to believe that Measles was introduced from an adjoining township into a school which receives a large number of its scholars from this district, and we had no means of investigating these cases. The epidemic certainly commenced in the ward in which this school is situated, and gradually spread to the other schools, so that the school which was first affected was almost free when it appeared in the scholars of the other schools. This school, therefore, did not get closed.

The schools were closed as follows, and in the sequence as here recorded :—

| | | |
|---|---|---|
| Presbyterian Schools ..... | January 7th to 30th ..... | 24 days. |
| St. George's ..... | Feb. 16th to March 1st ..... | 14 „ |
| St. Mary's ..... | Feb, 16th to March 1st..... | 14 „ |
| St. Patrick's ..... | March 4th to 29th..... | 25 „ |
| St. Catharine's ..... | March 4th to 29th ..... | 25 „ |
| St. Michael's ..... | March 10th to 27th ..... | 18 „ |
| St. John's ..... | March 17th to April 14th... | 29 „ |
| St. Stephen's, Whelley..... | March 19th to April 4th ... | 17 „ |
| Mariebonne ..... | March 26th to April 18th... | 24 „ |
| National ..... | April 22nd to May 10th ... | 19 „ |
| St. Andrew's Schools ..... | April 22nd to May 10th ..... | 19 „ |
| St. Thomas's, Clayton St... | April 24th to May 10th ... | 17 „ |

The effect of school closure was not so marked as in the previous epidemic, and the reason for this was the delay in closing. It is, however, apparent that it did some good, as we had a diminution in the number of cases after March and April, the periods of school closure.

4. Disinfection.—Disinfection of rooms and clothing was carried out as far as practicable, but in the height of the epidemic steam disinfection of bedding and clothing could not be always undertaken.

Class rooms, and in some cases the whole school, were disinfected by sulphur, and disinfectants were freely employed.

## REMARKS.

Although we were not quite so successful in our efforts during this epidemic, we may attribute it to the want of early school closure. In my opinion 3 per cent. of absentees in the Infants' Department should be sufficient to close that department at once for at least three weeks, and if necessary the whole school. I think closure of the whole school is the most efficient, and have acted on this belief. It is apparent from the age incidence of cases that the greatest number of cases have occurred between the ages of 5 and 10 years.

It is no use depending on the efforts made by the managers to prevent the spread of this disease, and prompt measures should be adopted by the Sanitary Authority when it is cognisant of the number of absentees.

The ignorance of parents also is another obstacle in the prevention of Measles, and also in the fatality, for sufficient care is not taken in the early stages, and often medical aid is not sought till serious symptoms arise. Nearly all the deaths are due to complications, for it is very seldom now that a child dies from Measles pure and simple.

Disinfection of houses and clothing is beneficial, and in my opinion this is the reason why so few cases occurred in the same house (1,373 cases occurring in 1,042 houses), as in many houses the isolation was imperfect.

I am of opinion that notification of the first case in a house by the medical man is of service, as we then always know the district in which Measles is present.

The following is a copy of the printed instructions left at each house :—

The Sanitary Department,
14, Rodney Street, Wigan.

## MEASLES.

In consequence of the prevalence of Measles the Sanitary Committee desires the following information to be made known :—

Measles is a highly infectious disease, and is spread through the exhalations (breath, &c.) of the patient, and

the infection can be carried in the clothes. It comes on suddenly, and is marked by all the signs of an ordinary cold (sneezing, short cough, feverishness, &c.) This is followed by a blotchy red eruption, appearing on the face, body, and limbs. The great danger to life from Measles is due to the risk of lung mischief, and the patient requires to be kept warm and in a warm room. A medical man should be called in early.

## PRECAUTIONS.

The patient should be well isolated in a room where other children cannot have access. A good fire should be kept up and ventilation maintained, and the nurse should not be allowed to mix with other children. Visitors, and especially children, should not be allowed to visit the house, and disinfectants should be freely used. A sheet soaked in some disinfectant should be hung over the door on the outside of the room. Disinfectants can be had at the Sanitary Offices free of cost.

All cases of infectious sickness should be notified at the Sanitary Offices; and also to the School Authorities.

No children should be allowed to attend school from the infected house until the rooms and clothing have been disinfected.

Delivered to.....

By..... Sanitary Officer.

Date.....

## Appendix II.

---

[Copy].

Corporation of Wigan.

Officer of Health's Department,

November 16th, 1903.

To the Chairman and Members of the Sanitary Committee.

*Re* ZYMOTIC DIARRHŒA.

Gentlemen,

The Local Government Board has directed the Town Clerk to ask me to report on the number of deaths from Diarrhœa during the third quarter of the year, and I now beg to submit to you my report on the deaths from this disease since January 1st, 1903. By doing so we are better able to perceive when the deaths increase in number, and also to judge of the causes contributing thereto. I have also given the number of deaths from diarrhœa for the past three years.

You will probably instruct your Town Clerk to forward a copy of this report to the Local Government Board.

I am, Gentlemen,

Your obedient Servant,

WM. BERRY,

Medical Officer of Health.

### REPORT ON DEATHS FROM ZYMOTIC DIARRHŒA

From January 1st, 1903, to October 31st, 1903.

The number of deaths from Zymotic Diarrhœa is 76, there being 3 in the first quarter of 1903, 4 in the second quarter, and 60 in the third quarter; also 9 deaths in October.

You will perceive that the greatest number of deaths occur in the third quarter of the year, and no doubt this is due to the climatic conditions which arise at this time.

Although we have had a cool, wet summer, we had a period of heat at the end of July and through a great portion of August, and from the annexed table you will see the greatest number of deaths occurred in this month. 75·75 per cent. of these were bottle fed or artificially fed, and in addition, in 12 out of 66 cases there existed some insanitary condition of the house.

For the purpose of comparison I give the age incidence of the disease, number of cases for the past 10 months, and also for the three previous years.

| Months. | 0-1 Year. | 1-5 Years. | Over 5 Years | Number of Deaths. |
|---|---|---|---|---|
| January ..... ... | 1 | 1 | ... | 2 |
| February ..... | ... | ... | ... | ... |
| March ..... | ... | 1 | ... | 1 |
| April ..... | ... | ... | ... | ... |
| May..... | 2 | ... | ... | 2 |
| June ..... | 1 | ... | 1 | 2 |
| July..... | 6 | ... | ... | 6 |
| August ..... | 27 | 8 | ... | 35 |
| September ..... | 13 | 5 | 1 | 19 |
| October ..... | 3 | 5 | 1 | 9 |
| Total ..... | 53 | 20 | 3 | 76 |

For the year 1902 we have the following :—

| Months. | 0-1 Year. | 1-5 Years. | Over 5 Years | Number of Deaths. |
|---|---|---|---|---|
| January ..... | 1 | ... | ... | 1 |
| February ..... | ... | ... | ... | ... |
| March ..... | 1 | 1 | ... | 2 |
| April ..... | 1 | ... | ... | 1 |
| May ..... | 1 | ... | 1 | 2 |
| June..... | 2 | ... | ... | 2 |
| July ..... | 3 | 1 | ... | 4 |
| August ..... | 7 | 2 | ... | 9 |
| September ..... | 21 | 3 | ... | 24 |
| October ..... | 7 | 4 | ... | 11 |
| November ..... | ... | ... | ... | ... |
| December ..... | ... | ... | 1 | 1 |
| Total ..... | 44 | 11 | 2 | 57 |

For the year 1901 we have the following :—

| Months. | 0-1 Year. | 1-5 Years. | Over 5 Years | Number of Deaths. |
|---|---|---|---|---|
| January ..... | 1 | 1 | ... | 2 |
| February ..... | 2 | ... | ... | 2 |
| March ..... | ... | ... | ... | ... |
| April ..... | ... | ... | ... | ... |
| May ..... | 1 | ... | ... | 1 |
| June ..... | 5 | 1 | ... | 6 |
| July ..... | 25 | 4 | 1 | 30 |
| August ..... | 64 | 14 | 6 | 84 |
| September ..... | 15 | 8 | 3 | 23 |
| October ..... | 6 | 3 | 1 | 10 |
| November ..... | 2 | 2 | ... | 4 |
| December ..... | 1 | ... | ... | 4 |
| Total ..... | 122 | 33 | 11 | 166 |

For the year 1900 we have the following :—

| Month. | 0-1 Year. | 1-5 Years. | Over 5 Years | Number of Deaths. |
|---|---|---|---|---|
| January ..... | 1 | ... | ... | 1 |
| February ..... | ... | ... | ... | ... |
| March ..... | 1 | ... | ... | 1 |
| April ..... | ... | 1 | ... | 1 |
| May ..... | ... | ... | 1 | 1 |
| June ..... | 1 | 1 | ... | 2 |
| July ..... | 2 | ... | 1 | 3 |
| August ..... | 23 | 1 | ... | 24 |
| September ..... | 25 | 9 | ... | 34 |
| October ..... | 4 | 2 | ... | 6 |
| November ..... | 1 | 1 | ... | 2 |
| December ..... | ... | 2 | ... | 2 |
| Total ..... | 58 | 17 | 2 | 77 |

It will be perceived that the hot summer of 1901 gave us a very large number of deaths from zymotic diarrhœa ; in the cooler summers we have a less number. It will, however be noticed that the number of deaths are greatest in August and September in each year. I have frequently called attention to this in my monthly reports, and to its cause, namely, the injudicious feeding of the young, and the partaking of unripe or decomposed fruit in those older. As the majority of deaths occur in children under one year of age I drew up instructions as follows for the use of the parents :—

## SUMMER DIARRHŒA.

The number of deaths from this disease in Wigan last year was 76, and, as the majority of these are preventable, it is desirable that some information should be given to the public through the Sanitary Committee. I therefore submit the following plain statements or suggestions for its prevention :—

1st. Diarrhœa is often only a symptom of some other disease, such as Typhoid or Enteric Fever, Consumption of the Bowels or Lungs, and Disorders of the Stomach and Liver. This form of Diarrhœa requires judicial treatment by a medical man.

2nd. Diarrhœa is set up by injudicious feeding, especially in infants and young children, through eating unripe or decaying fruits, sudden changes of temperature, and by drinking large quantities of cold drinks when very hot and perspiring.

3rd. Diarrhœa, in the hot weather, may be readily set up where we have insanitary surroundings, bad drainage, unpaved yards, and accumulation of garbage (vegetable and animal), the want of cleanliness in yards and passages, and the absence of frequent cleansing of the surface.

4th. Diarrhœa usually sets in about the middle of June, when the temperature of the earth is above normal, and lasts till the middle of October, and may be said to be in epidemic form from the end of June to the end of September. The deaths number greatest in August, though July and September are months which contribute a fair share. The disease is most fatal in young children under one year of age, and in the aged.

## PRECAUTIONS TO BE TAKEN.

1st. Every precaution should be taken to avoid the causes already mentioned.

2nd. Extremes of heat and cold should be avoided, and cold drinks, when people are hot, should not be taken. Personal cleanliness is desirable. Young children should have a bath or be sponged down with tepid water night and morning.

3rd. Frequent cleansings of yards and passages should take place, and no filth accumulations allowed to remain. Disinfecting powder (which may be had at the Sanitary Offices) may be frequently sprinkled over unpaved yards and passages.

4th. Moderation in eating and drinking should be observed; unripe and uncooked fruits should be avoided.

5th. As young infants brought up with the feeding bottle are peculiarly liable to this disease, and amongst whom it is very fatal, the following simple rules should be observed:—

## FEEDING OF INFANTS.

1. The natural and best food for a child is its mother's milk (breast fed children are healthiest and strongest), and next best is cow's milk diluted and prepared.

2. To feed a child because it cries is a mistake; a child should be regularly fed, whether by breast or hand.

During the first month: Once every two hours between 4 a.m. and 10 p.m., and once in the night between 10 p.m. and 4 a.m.

During the second month: Once every $2\frac{1}{2}$ hours during the day, and once during the night.

From the third month: Once in every three hours in the day, and once during the night if the infant awakes.

3. During the period of suckling the mother should drink freely of milk at her meals, and also have a cup of cocoa or milk between meal times. Stimulants should be avoided except under medical advice.

4. An infant should be fed slowly; each meal should last about 15 minutes. It should have nothing but its mother's milk till it is seven months old.

5. When the mother's milk for some reason or other is absent, and the child is to be brought up by hand (hand or bottle-fed), then cow's milk, properly diluted with water (or barley water) boiled, and a little sugar added, is the best substitute.

| Age of Child. | Quantities. | For each Meal. |
|---|---|---|
| Under 6 weeks old..... | One part new milk, two parts water. Mix and boil. | Give four tablespoonfuls. |
| Over 6 weeks and under 12 weeks ..... | One part new milk, one part water. Mix and boil. | Give eight tablespoonfuls. |
| 3 months to 8 months..... | Two parts new milk, one part water. | Give eight tablespoonfuls. |

N.B.—The milk used should be as fresh as possible, and should be prepared fresh for each meal. A little salt and some sugar should be added to make it palatable; a tablespoonful of lime water causes the food to agree better.

6. It is always better to feed an infant with a spoon from a cup, or from a small feeding cup; if, however, a feeding bottle is used it should be flat and boat-shaped, and have no tubing of any kind. A cow's teat or an indiarubber one should be used; one that can be turned inside out and easily cleaned. Any remains of the milk in the bottle should be thrown away. Two bottles should be in use alternately, one being soaked in cold water whilst the other is in use, and should be kept in a clean place free from dust.

Dummy teats should not be given to children.

7. After eight months five meals a day should be given at regular intervals. Arrowroot or cornflour may be added, and at ten months rusks may be given. The meal times should be 7 a.m., 11 a.m., 1 30 p.m., 5 30 p.m., and 10 p.m.

Weaning should take place between the 10th and 12th month; if the child has been suckled, then it should get a milk diet, prepared as before, with cornflour or arrowroot added, and from 12 to 18 months old, oatmeal porridge with plenty of milk may be given.

8. Avoid giving children tea, beer, spirits, or cheese, and never give them teething powders or soothing syrups.

9. When any illness occurs, and especially Diarrhœa, medical aid should be sought; it is the neglect of Diarrhœa in the early stages that causes danger and death.

10. Children should be taken out in the fresh air as much as possible, and kept out of the sun's rays. They should not be allowed to play in the gutters, or near gullies or drain openings in the street or back yards.

Diarrhœa in the adult should never be neglected; if caused by errors in diet or from the greater heat or exhaustion, or, in fact, from any cause whatever, neglect usually proves disastrous. Medical aid should be early sought.

## GENERAL INSTRUCTIONS.

1. Fresh air should be freely admitted into and through the house. Sleeping rooms should be well ventilated, back yards and passages should be frequently cleansed, no accumulation of green vegetable or animal refuse should be allowed, the ashes should be placed in the ash tubs and kept constantly dry. All other refuse matter, such as garbage, should be burned.

Soap suds should not be allowed to lie in pools, but should be swilled away.

2. Children should be sponged all over night and morning, and frequent baths and spongings are beneficial for everyone.

Cleanliness is essential to good health Poverty is no excuse for filth and dirt.

In summer time children should be lightly clothed, and extremes of heat and cold should be avoided. Woollen clothing should be worn next to the skin.

4. Moderation in eating and drinking should be enjoined; excess in either leads to stomach and bowel derangements, and leads to diarrhœal diseases.

Temperance is conducive to good health.

Issued by permission of the Sanitary Committee by the Medical Officer of Health.

Officer of Health's Department,
Rodney Street, Wigan.
May, 1900.

These have been printed in pamphlet form, and are given out by the Registrar of Births when a birth is registered.

What else can be done, it is difficult to say; education and better training in regard to the nursing of children will do a lot to lessen the mortality from this disease. At the same time we must remember that we have a large birth-rate, and in consequence have a number of delicate children that have little stamina when born.

WM. BERRY,

Medical Officer of Health.

# County Borough of Wigan.

# ANNUAL REPORT

OF THE

# Chief Sanitary Inspector.

## 1903.

WIGAN:

THOS. WALL AND SONS LTD., PRINTERS, "OBSERVER" OFFICE.

1904.

## TABLE OF CONTENTS.


| | Page |
|---|---|
| Summary of Nuisances dealt with ... .. ... ... | 113 |
| Common Lodging-Houses ... .. ... ... ... | 114 |
| Slaughter-Houses .. ... ... ... ... ... | 115 |
| Fellmongers ... ... ... ... ... ... ... | 116 |
| Gut Scrapers ... ... ... ... ... ... ... | 116 |
| Tripe Dresser ... ... ... ... ... .. ... | 116 |
| Canal Boats ... ... ... ... ... ... ... | 117 |
| Smoke Observations ... ... ... ... ... .. | 118 |
| Disinfection, 1902 ... ... ... ... ... ... | 118 |
| Food and Drugs and Margarine Acts .. ... ... ... | 118 |
| Factory and Workshops Acts ... ... ... ... ... | 119 |
| Shop Hours Acts ... ... ... ... ... ... | 119 |

# Annual Report of the Chief Sanitary Inspector, 1903.

Sanitary Department,
14, Rodney Street,
Wigan.

*To the Chairman and Members of the Sanitary and Sewerage Committee.*

Sir and Gentlemen,

I have the honour to submit to you my Thirteenth Annual Report of the work done by the staff of this department during the year ending 31st December, 1903.

The following is a summary of the work done, and a description of the nuisances dealt with.

| | |
|---|---|
| Houses and Premises Inspected and Visited (Nuisance) | 7,670 |
| Nuisances Discovered ... ... ... ... ... | 2,574 |
| „ Abated ... ... ... ... ... | 1,958 |
| Notices Issued (Preliminary) ... .. ... ... | 924 |
| „ (Formal... ... ... ... ... | 1,524 |
| Letters written *re* Nuisances ... ... ... ... | 133 |
| Re-Inspections made (about) ... ... ... ... | 4,532 |
| Other Visits ... ... ... ... ... ... | 453 |
| Nuisances remaining on books December 31st, 1903... | 900 |

## DESCRIPTION OF NUISANCES DEALT WITH.

| | |
|---|---|
| Defective Drains... ... ... ... ... .. | 94 |
| Choked „ ... ... ... ... ... ... | 143 |
| Defective Gullies... ... ... ... ... ... | 54 |
| „ „ Requiring Grids ... ... ... | 23 |
| „ Sink Waste Pipes, Slopstones, and want of Slopstones ... ... ... ... | 159 |
| Sink Pipes connected to Drain ... ... ... | 23 |
| Bath and Lavatory Waste Pipes connected to Drains or Soil Pipes ... ... ... ... | 30 |
| Bath and Lavatory Waste Pipes Defective ... ... | 1 |
| Soil Pipes Defective ... ... ... ... ... | 21 |
| „ Unventilated or Insufficiently Ventilated... | 12 |
| Defective Water Closets... ... ... ... ... | 22 |
| „ Condition of Pail Closets .. .. ... | 92 |
| „ and Choked Waste Water Closets ... ... | 63 |
| „ Condition of Ashplaces ... ... ... | 58 |
| „ and Foul Privies ... ... ... ... | 15 |
| „ Water Supply to W.C's. ... ... ... | 2 |
| „ W. C. Cisterns ... ... .. ... | 14 |

| | |
|---|---|
| Insufficient Closets to Houses or Workshops ... ... | 7 |
| Defective and Foul Urinals ... ... ... ... | 1 |
| „ Spouts (Eaves and Downspouts) ... | 209 |
| „ Roofs ... ... ... ... ... ... | 240 |
| „ and Unpaved Yards, Passages or Yard Surface ... ... ... ... ... | 322 |
| Want of Spouting to Premises ... ... ... ... | 9 |
| Houses without proper Drainage ... ... ... | 21 |
| „ Overcrowded or Keeping of Lodgers ... ... | 52 |
| „ and Premises Filthy (including Walls and Ceilings requiring Limewashing) ... ... | 202 |
| „ with Filthy Closets ... ... ... ... | 17 |
| „ „ Yards ... ... ... ... | 13 |
| „ Damp or Defective Walls ... ... | 135 |
| „ Without proper or through Ventilation (Back-to-Back Houses) ... ... ... ... | 144 |
| „ Without properly covered Ash Receptacles and without Ashtubs ... ... ... ... | 64 |
| Workshops Insufficiently Ventilated ... ... ... | 2 |
| Defective Middensteads and want of Middensteads ... | 4 |
| Accumulation of Manure ... ... ... ... | 31 |
| „ of Water ... ... ... ... ... | 9 |
| „ of Rubbish ... ... ... ... | 17 |
| Keeping of Animals (including Poultry and Pigeons) | 80 |
| Bakehouses requiring Limewashing ... ... ... | 104 |
| Workshops „ „ ... ... ... ... | 58 |
| Houses with Foul Closets (Pan and others) ... ... | 3 |
| Miscellaneous ... ... ... ... ... ... | 143 |

## COMMON LODGING HOUSES.

These houses have been regularly visited by day and also by night both by Mr. Bishop and myself, and have generally been found in a satisfactory condition. The keepers in every instance have seemed to do their best to assist the Inspectors by seeing their places kept in a clean condition.

As I have before reported to you, the majority of the houses are not fitted for Common Lodging Houses, but taken as they are they will compare favourably with any other town.

Ten cases of Small Pox occurred in five of the houses during the year; those persons suffering were at once removed to the Decker Hospital, and the lodging-houses thoroughly fumigated, the bedding being stoved at the Miry Lane Disinfector.

The other persons residing in the houses were persuaded in the majority of cases to submit to re-vaccination. One man who refused the operation contracted the disease, but in no instance were the others attacked. In some of the houses where the disease appeared we had to destroy some of the clothing belonging to the lodgers, it being in such a bad condition; other clothes were provided.

| | |
|---|---|
| No. of Common Lodging Houses registered in the Borough ... ... ... ... ... ... | 18 |
| No. of Lodgers allowed nightly ... ... ... | 753 |
| ,, Visits by day ... ... ... ... ... | 1,899 |
| ,, ,, by night ... .. ... .. | 428 |
| ,, Lodgers reported as being received ... ... | 192,126 |
| ,, Letters sent out ... ... ... ... | 7 |
| ,, Visits to Houses let in Lodgings ... ... | 34 |

## HOUSES.

| No. on Register. | | Registered for |
|---|---|---|
| 1 | 2 and 4, John Street ... ... ... ... | 12 |
| 2 | Brown Cow ... ... ... ... ... | 24 |
| 5 | 1, 3, and 5, Union Street .. ... ... | 48 |
| 6 | 16, Hardybutts ... ... ... ... ... | 8 |
| 7 | 87, 89, and 91, Millgate ... ... ... ... | 60 |
| 8 | 1, Hardybutts ... ... ... ... ... | 100 |
| 10 | 31, Scholes ... ... ... ... ... | 15 |
| 12 | 7, Wiend ... ... ... ... ... ... | 20 |
| 13 | 1, Swift's Yard, Millgate... ... ... ... | 38 |
| 14 | 7, Hardybutts ... ... ... ... ... | 12 |
| 15 | 32, Hardybutts ... ... ... ... ... | 29 |
| 24 | 28, Wiend... ... ... ... ... | 41 |
| 34 | 27, Hallgate ... ... ... ... ... | 85 |
| 35 | 19, Warrington Lane ... ... ... ... | 33 |
| 36 | 1, 3, 5, 7, 9, Scholes ... ... ... ... | 71 |
| 37 | 7 and 9, Union Street ... ... ... ... | 52 |
| 38 | 36 and 38, Hardybutts ... ... ... ... | 88 |
| 39 | 21, Hardydutts ... ... ... ... ... | 17 |

## SLAUGHTER HOUSES.

None of our Slaughter Houses are at all up-to-date, and in fact, many of them are not at all fitted for the purpose of which they are used, they being old buildings which have been converted for the purpose, prior to 1875.

Considering their structural arrangements they are kept fairly well, the occupiers seem at all times only too ready to call in the Inspectors when their services may be required. The offal is removed regularly, and during

the past year there has been very little cause of complaint. The practice of blowing veal was in vogue, but stringent steps have been taken by the Council, and by the Wigan Act of 1902, Section 46, it is a finable offence to do it.

Appended is a list of visits, etc., to the Slaughter Houses and Markets.

## SLAUGHTER HOUSES AND MARKETS, &c.

| | | |
|---|---|---|
| No. of Slaughter Houses... ... ... ... ... | | 19 |
| „ Visits to Slaughter Houses ... ... ... | | 336 |
| „ „ Markets... ... ... ... ... | | 183 |
| „ Offensive Trades ... ... ... ... ... | | 5 |
| „ Visits ... ... ... ... ... | | 5 |
| „ Letters sent out ... ... ... ... ... | | 1 |

## SLAUGHTER-HOUSES.

| | | |
|---|---|---|
| 1. | Behind 8, Darlington Street... ... | F. Knorzer. |
| 2. | „ 60, Darlington Street ... | J. H. Green. |
| 6. | Upper Morris Street ... ... ... | W. Walsh. |
| 7. | Rigby's Building's, Scholes ... ... | H. Smith. |
| 8. | Behind 124, Scholes ... ... ... | J. Watts. |
| 11. | Wiend... ... ... ... ... | H. Sawbridge. |
| 12. | Water Street ... ... ... ... | J. H. & W. Cordeaux. |
| 14. | Behind 75, Wigan Lane ... ... | J. Jackson. |
| 18. | Bottom Croft ... ... ... ... | W. R. Dunbar. |
| 19. | Shaw's Yard, Hallgate ... ... | J. Smirk. |
| 24. | Clayton Street ... ... .. | C. Sawbridge. |
| 28. | Hilton's Yard, Scholes ... ... | J. Hilton. |
| 29. | Mill Yard, Scholes ... ... ... | E. Hamill. |
| 30. | Behind 53, Birkett Bank ... ... | B. Turner. |
| 32. | Altham's Yard, Standishgate ... | R. V. Swarbrick. |
| 36. | Silver Street ... . . ... ... | E. McAvoy. |
| 39. | Behind 133, Standishgate ... ... | J. Hill. |
| 41. | 122, Scholes ... ... . ... | J. Lowe. |
| 42. | Shaw's Yard, Hallgate ... ... | H. Hurst. |

## FELLMONGERS.

| | |
|---|---|
| Millgate ... ... ... ... ... | T. E. Dix. |
| Church Street ... ... ... ... | J. Smith. |

## GUT SCRAPERS.

| | |
|---|---|
| Shaw's Yard, Hallgate ... ... ... | J. Eckmann. |
| Robin Hood Yard, Hallgate ... ... | F. Pietsch. |

## TRIPE DRESSER.

| | |
|---|---|
| Watmough's Yard, Scholes ... ... | P. Gallagher. |

Number of beasts that have been inspected by request:—

| | |
|---|---|
| No. of Beasts passed ... ... ... ... | 58 |
| „ condemned ... ... ... | 1 |
| Total ... ... ... | 59 |

## FOOD CONDEMNED, 1903.

| Month. | Rabbits. | Offal. | Fish. | Pork. | Shell Fish. | Meat. |
|---|---|---|---|---|---|---|
| January ..... | — | — | — | — | — | — |
| February ... | 136 | 3 bags | — | — | — | — |
| March ..... | — | — | — | — | — | — |
| April ..... | — | — | 81 boxes | — | — | — |
| May..... | — | 3 bags | 4 boxes | — | — | — |
| June ..... | 11 | — | 24 boxes | 4 boxes | — | — |
| July..... | — | 1 bag | 25 boxes | — | — | — |
| August ..... | — | 6 bags | 5 boxes & 140 lbs. | — | — | — |
| September ... | 303 | 3 bags | 50 boxes | — | — | 1 beast |
| October ..... | 183 | 1 bag | 9 boxes | — | 4 bags | — |
| November ... | — | — | — | — | — | — |
| December ... | — | — | — | — | — | — |

The following statement shows the quantities of unwholesome food, destroyed at the Miry Lane Depôt during the year:—

| | Tons. | Cwts. | Qrs. |
|---|---|---|---|
| Beef ... ... ... ... | 3 | 11 | 2 |
| Pork ... ... .. ... | 0 | 6 | 0 |
| Flat Fish... ... ... ... | 34 | 5 | 3 |
| Total ... ... ... | 38 | 3 | 1 |

In addition to the above the following was destroyed:—

| | Tons. | Cwts. | Qrs. |
|---|---|---|---|
| Shell Fish and Fish Refuse ... | 28 | 5 | 3 |
| Other Refuse ... ... ... | 44 | 19 | 2 |
| Total ... ... ... | 73 | 5 | 1 |

## CANAL BOATS ACT, 1877 TO 1884.

The length of Canal in the Borough has been frequently visited during the year, and the boats met with have been inspected. There have been more contraventions than usual, but they have been generally through the marking of the stern not being in accordance with the certificate. All the notices have been complied

with. Mr. Llewellyn, H.M. Inspector, visited the office, and went carefully through the work done under the Acts, and expressed himself very well pleased with the way the work was carried out in the district under your supervision.

## CANAL BOATS ACT, 1877—1884.

| | |
|---|---|
| No. of Boats Registered at Wigan ... ... ... | 123 |
| „ Applications for Registration during 1903 ... | 2 |
| „ „ Granted ... ... ... ... | 2 |
| „ Inspections ... ... ... ... ... | 190 |
| „ Notices Issued ... ... ... ... ... | 27 |
| „ „ Complied with ... ... ... ... | 18 |
| „ Contraventions of Regulations ... ... ... | 38 |
| „ Boats Re-Registered ... ... ... ... | 1 |
| „ Letters Sent Out ... ... ... ... ... | 37 |

## SMOKE NUISANCES.

| | |
|---|---|
| No. of Smoke Observations Taken ... ... ... | 13 |
| „ Letters Sent Out ... ... ... ... ... | 5 |

No Notices have been Issued.

## INFECTIOUS DISEASES (PREVENTION) ACT.

| | |
|---|---|
| No. of Houses Disinfected ... ... ... ... | 1,609 |
| „ Rooms „ ... ... ... ... | 2,205 |
| „ Beds „ ... ... ... ... | 1,647 |
| „ Mattresses „ ... ... ... ... | 1,042 |
| „ Sheets and Quilts Disinfected ... ... | 5,099 |
| „ Other Articles... ... ... ... ... | 5,834 |

| | |
|---|---|
| No. of Premises Cleansed and Limewashed after Infectious Disease ... ... ... .. | 1,321 |
| No. of Visits to Houses *re* Cleansing and Limewashing | 1,928 |
| „ „ „ Infectious Disease ... | 3,950 |
| „ Letters, *re* Limewashing ... ... ... | 199 |
| „ „ Infectious Disease ... ... | 36 |

## SALE OF FOOD AND DRUGS ACTS, 1877 TO 1899.

## MARGARINE ACTS, 1887 TO 1899.

The attention of the Department has been carefully directed to the carrying out of the above Act, details of which appear below.

| | |
|---|---|
| No of Samples Obtained for Analysis ... | 159 |
| „ „ Genuine ... ... ... | 150 |
| „ „ Adulterated ... ... ... | 9 |

## SAMPLES.

| | |
|---|---|
| Milk ... ... ... ... ... ... | 60 |
| Butter ... ... ... ... ... ... | 70 |
| Margarine ... ... ... ... ... | 1 |
| Cheese ... ... .. ... ... ... | 1 |
| Spirits ... ... ... ... .. ... | 12 |
| Lard ... ... ... ... ... ... | 9 |
| Pepper .. ... ... ... ... ... | 6 |

| | |
|---|---|
| Prosecutions ... ... | 1 |
| Conviction... ... ... | 1 |

Four samples not taken as samples for analysis.
Three cases no action taken, people warned.
One suspicious, no action taken.
One action taken.

## SHOP HOURS ACTS, 1892-1899.

| | |
|---|---|
| No. of Visits to Shops (Day) ... ... ... ... | 74 |
| ,, ,, (Night) ... ... ... ... | 25 |

## FACTORY AND WORKSHOPS ACTS.

| | |
|---|---|
| No. of Visits to Workshops (Day) ... ... ... | 922 |
| ,, Letters sent out ... ... ... ... ... | 64 |

## DAIRIES, COWSHEDS, AND MILKSHOPS ORDER, 1885-1886.

| | |
|---|---|
| No. of Visits to Milkshops ... ... ... ... | 108 |

## BAKEHOUSES.

| | |
|---|---|
| No. of Visits to Bakehouses ... ... ... ... | 260 |

## PROSECUTIONS, 1903.

April 6th.—C. P., of Driving Lane. Fined 10s. and costs, for failing to notify a case of infectious disease.

April 6th.—T. P., of Driving Lane. Fined 10s. and costs, for failing to notify a case of infectious disease.

April 6th.—A. B., of France's Yard, Cross Street. Fined 10s. and costs, for failing to notify a case of infectious disease.

April 23rd.—Messrs. J. H. N. and Son, of Water Street. Fined 5s. and costs, for having in their possession 15 boxes of unsound codfish.

Nov. 23rd —P. M., of Scholes. Fined 20s. and costs, for selling to the prejudice of the purchaser butter not of the nature, &c., demanded.

In conclusion, Gentlemen, I must thank you all for the generous support given to this department, and must also thank the individual members of the staff for their loyal and zealous work during the past year.

I remain, Gentlemen,

Your obedient Servant,

J. SUMNER, A.S.I.,

Chief Sanitary Inspector.




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